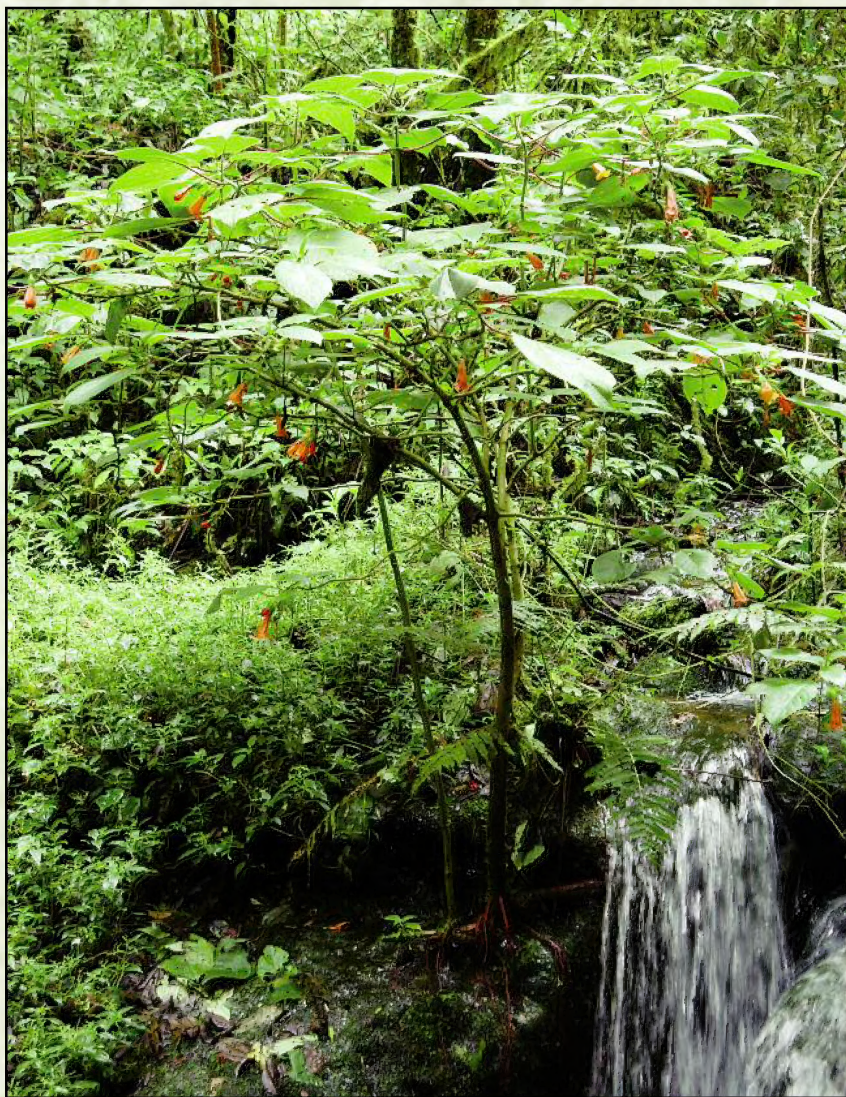


GESNERIADS

The Journal for Gesneriad Growers (formerly The Gloxinian)

Vol. 57, No. 3

Third Quarter 2007



Solenophora calycosa

The Gesneriad Society, Inc.

A non-profit membership corporation chartered by the State of Missouri

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Gesneriad Hybridizers Association — *CrossWords*, 3 issues, \$8 (\$9 outside U.S.A.). Send to Martha Lacy, 260 Stoddards Wharf Rd., Gales Ferry, CT 06335 <wlcacy@snet.net>.

Newsletter Editors — *Newsviews*, free to editors; \$6 subscription to others. Contact Leslie Milde, 373 Main St., P.O. Box 14, Fremont, NH 03044 <meribush@aol.com>

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British Streptocarpus Society — <www.streptocarpussociety.org.uk> To join from the USA/Canada send \$10 check payable to Dale Martens, 1247 Island View Dr., Sherrard, Illinois 61281. To join from any other country, send £7 or 10€ to Don Corfield, 1019 Warwick Rd, Acocks Green, Birmingham, England, B27 6QJ.

Marie Selby Botanical Gardens — 811 South Palm Avenue, Sarasota, FL 34236 (914-366-5731) <www.selby.org>
Gardens open 364 days a year from 10:00 a.m. to 5:00 p.m. Admission free; members free. Outdoor gardens, tropical display house, tree lab, al fresco lunch cafe, plant, book and gift shops.

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OBJECTS OF THE SOCIETY — The objects of The Gesneriad Society are to afford a convenient and beneficial association of persons interested in gesneriads, to stimulate a widespread interest in, gather and publish reliable information about the identification, correct nomenclature, culture and propagation of gesneriads; and to encourage the origination and introduction of new cultivars.

GESNERIAD REGISTRATION — The Gesneriad Society, Inc. is the International Registration Authority for the names and cultivars of gesneriads excepting the genus *Saintpaulia*. Any person desiring to register a cultivar should contact Judy Becker, 432 Undermountain Road, Salisbury, CT 06068 <hybridregistrar@gesneriadsociety.org>.

visit

www.gesneriadsociety.org

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CONTENTS

President's Message	
— Carol Ann Bonner	4
Gesneriad Society Publications	5
Seed Fund	
— Carolyn Ripps & Gussie Farrice	6
<i>Solenophora</i> : a Little-Known Genus of Central American Gesneriaceae	
— Anton Weber & Anton Weissenhofer	12
Hints on Growing <i>Solenophora</i>	
— Bob Stewart	20
Encountering <i>Solenophora</i> in Panama	
— Jonathan Ertelt	20
Searches for <i>Solenophora</i> in Mexico	
— Miriam Denham.....	22
Botanical Review #33	
— John Boggan	28
Growing Gesneriads in Umeå, Sweden	
— Marlene Bylund	31
Gesneriads in Australia	
— Ruth Coulson	34
Playing with <i>Streptocarpus</i> in South Africa	
— Jaco Truter	38
Gesneriad Register	
— Judy Becker.....	42
Additions to Hybrids Seed List	47
New and Updated Online Contributions from Vienna on Gesneriaceae	
— Anton Weber	48
Coming Events	53

COVER

Solenophora calycosa
in its natural habitat, a
tropical montane rain
forest in Costa Rica
(photo by A. Weissenhofer)

President's Message

Carol Ann Bonner <president@gesneriadsociety.org>
Nashville, Tennessee, USA

Gesneriads sans Frontieres

In my first presidential message published in the fourth quarter 2005 issue of THE GLOXINIAN, I touched upon the international character of the American Gloxinia and Gesneriad Society; now in my final presidential message published in the third quarter 2007 issue of GESNERIADS, I'd like to revisit the theme of internationalism in The Gesneriad Society.

Plants are no respecters of political boundaries, just as they are no respecters of the taxonomic boundaries we humans try to place around them. (But just as political boundaries may sometimes follow geographic features, we hope that taxonomy is mostly following genetic relationships.) *Kohleria spicata* grows along roadsides from Mexico to Peru; *Chirita speciosa* inhabits wet valleys from northeast India and China's Yunnan province to Vietnam. Similarly, the love of plants in general, and gesneriads in particular, knows no borders. At convention programs I've seen pictures of the same species and hybrids I'm growing in Tennessee blooming in windowsills in Sweden, a lath house in Australia, greenhouses in Britain and Japan, and a porch in Malaysia. I've personally seen *Episcias* growing in coffee cans on balconies in Ecuador and *Chiritas* popping up incongruously among the native plants cultivated by Mauro Peixoto in Brazil. We're everywhere!

The way to express this international love of gesneriads is **not** to send plants willy-nilly across borders; pests and diseases are no respecters of borders either, but that's no reason to help them along. One safe way is to exchange information and pictures via The Gesneriad Society and other websites and email lists for plant hobbyists. I loved finding out that sphagnum peat moss, which is the basis for most soil-less mixes here in the U.S., is not readily available in much of the world; I first read about coir in a post by an Asian grower who was looking for a locally produced substitute for peat. Instead of pumice, some European growers use crushed bricks – I'm afraid I'd have to reinforce my greenhouse benches if I tried that.

Nothing says "I love you" like a gift; and to be cross-culturally correct, you can donate seed to the Seed Fund. (Please note that to be legally imported into the United States, seed must be clean of plant debris – which would also greatly please Karyn Cichocki and Marilyn Allen!) Supporting the Seed Fund helps support your Society which, in turn, financially assists field researchers in discovering new species in the shrinking cloud and rain forests of the world. Those intrepid field botanists also contribute to the Seed Fund which efficiently distributes those newly discovered plants to all of us.

Another way to share this border-defying love is to attend or send a representative to attend either an annual convention or a flower show in another country. Unfortunately, we can't all afford international travel; but we may have friends who can, friends who can bring back inspected, pest-free plant material. As easy as most gesneriads are to propagate, it won't be long before the previously rare ends up the suddenly ubiquitous, but no less beautiful.

As I sit at the computer, I can look out the window into the attached greenhouse and see plants that I grew from cuttings or seeds that came directly from Sweden, Brazil, Ecuador, and a bunch from Canada. There are stories and memories and people attached to each of those plants – stories and memories and people from all over the world. The Gesneriad Society is a small society, but as the world gets smaller and smaller, we can reach all the way around it and tell plant lovers everywhere – join us!

Carol Ann

Gesneriad Society Publications

Back Issues

Back Issues, GESNERIADS (2006-7), per issue	\$7
Back Issues, THE GLOXINIAN (2004-5), per issue	\$6
Back Issues, THE GLOXINIAN (1996-2003), per issue	\$5

CD-ROM's

Gesneriads in the Wild (PowerPoint presentation w/audio narration)	\$10
THE GLOXINIAN 2005 (all 4 issues plus photos in high resolution)	\$10
GESNERIADS 2006 (all 4 issues plus photos in high resolution)	\$10
Gesneriad Screensaver 2004 (hundreds of images)	\$10
Alpine Gesneriads (PowerPoint plus 100 high-resolution images)	\$10
Convention 2006 (5 PowerPoint presentations + hundreds of images)	\$15

NOTE: All Gesneriad Registers are being revised and updated.

New Registers will be available soon in both print and electronic formats.

Flower Show Supplies

Flower Show Manual for Judges and Exhibitors (2000)	\$ 7
Flower Show Entry Cards (per 25)	\$10

All prices \$US. Please add \$3 per item for shipping and handling. To pay by credit card, specify Visa or MasterCard, include the credit card number, expiration date, and your signature with the order. Please allow 8 weeks for delivery. Order from Peter Shalit, Gesneriad Society Publications, 1122 East Pike Street, PMB 637, Seattle, WA 98122 <publications@gesneriadsociety.org>.

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Belisle's Violet House	19	McKinney's Glassehouse	32
Boonwood Garden Center	30	Mrs Strep Streps.....	32
Kartuz Greenhouses	47	Out of Africa	32
Lauray of Salisbury	27	Pat's Pets	32
Logan Nursery	32	Violet Barn.....	47
Lyndon Lyon Greenhouses, Inc.	30		

Seed Fund

Carolyn Ripps <species@gesneriadsociety.org>
Gussie Farrice <hybrids@gesneriadsociety.org>

It's convention time! We are looking forward to seeing our old and new friends, admiring the lovely show plants, and of course cruising the sales tables for new plants to add to the collection. It's always gratifying to see plants that have been grown from Seed Fund acquisitions and even nicer when fresh seed is returned to the Fund as the plants mature.

The Seed Fund presently consists of more than one thousand individual containers of species and hybrid seed donated at various times by many generous individuals. Because some of the donations did not have the names of the donors or the dates of the collection, we are uncertain about the age of some. Unfortunately, this may result in our sending seed of low viability, particularly when rare species are involved. It is not possible for us to test each container so we need your feedback about poor germination to alert us to seeds which have to be tested or withdrawn from the list. The more donations we receive, the more fresh seed will be available for distribution.

Some of you have inquired about the significance of the additional descriptions following species names and asked why they are written in a different type font. Species are the plants as found in nature, not ones that have been created by crossing two different types of plants. The Latin names of the species are always written in italics. Occasionally, different plants growing near each other in the wild may cross pollinate, helped by the birds or bees, to form a new intermediate variety. If this new plant is fertile, you may see its seed listed in the hybrid seed list, with the notation that it is a natural hybrid.

If you see a species name followed by something in single quotation marks (*Sinningia pusilla* 'White Sprite' or *Sinningia speciosa* 'Saltao'), it means that seed is from a distinct variant of a known species. When a new species (indicated by sp. in the listing) is discovered in the wild, it is often given a provisional name for identification purposes until a complete description has been published in a botanical publication and the plant gets its official name. The provisional name should be written in double quotations and often refers to the area where the plant was found or to a person whom the writer is thinking about honoring. Thus the recently discovered miniature species from Brazil should be identified as *Sinningia* sp."Rio das Pedras". Technically speaking, it could also be followed by the disclaimer (ined.) indicating that plant description has not yet been validly published, but the Seed Fund has elected to omit that because of space limitations. You should be aware, however, that the name may well change one or more times until the new species is published.

We wish to thank the following people who have recently contributed seed to the Fund: Marilyn Allen, Carol Ann Bonner, Laurie Bounsall, Karyn Cichocki, Martin Chapman, Bob Clark, Ray Coyle, Renaud Demers, Gail Grey, Robert Hall, John Jakell, Larry Kasman, Alan LaVergne, Leong Tuck Lock, JoAnne Martinez, Mauro Peixoto, Michael Riley, Carolyn Ripps, Peter Shalit, Al Striepens, the Toronto Gesneriad Society, Jaco Truter, and Wallace Wells.

Send orders for species seed from the following list to:

Carolyn Ripps
21 Sprain Road
Hartsdale, NY 10530

(A) Alpine or cool greenhouse	(LM) Low to medium height
(B) Suitable for hanging basket	(M) Medium height; 1 to 2 feet
(D) Has dormant period, forming tubers or rhizomes	(MT) Medium to tall
(F) Blooms readily in fluorescent light	(P) Petite or miniature; under 6"
(G) Recommended for greenhouses; requires space	(R) Rosette in form
(H) Requires humidity and warmth	(S) Requires sun to bloom
(L) Low growing; not more than 12"	(T) Tall plants; generally over 3 feet
	(U) Unifoliate or single leaf
	(V) Leaves may be variegated

Seed Fund – Species

Achimenes (D)

cettoana (B)

erecta (B)

erecta 'Tiny Red' (F,L)

- *grandiflora* 'Robert Dressler' (B)

Aeschynanthus (B)

batakiorum

- *boschianus*

buxifolius 913296

evrardii

fecundus SEL1974-2907-A

fulgens USBRG82-271

- *garrettii* (B)

gracilis 'Pagoda Roof'

humilis USBRG94-214

hosseusii

longicalyx

longiflorus

sp. MSBG87-162

- sp. Mt. Batupasak HW12587
- sp. (like slender *longicalyx*)
- sp. (yellow) (Philippines)

Agalmyla

- *parasitica*

Alsobia (B)

dianthiflora

Amalophyllon

- sp. RM2006-1 (Belize)

Anodiscus (see *Gloxinia*)

Besleria

laxiflora GRF9675 (M)

melancholica (MT)

cf. *divaricata* JLC5629

sp. GRF9783 (orange w/yellow base)

sp. GRF97108 (orange)

sp. GRF97141 (orange)

sp. GRF9853 (yellow)

sp. GRF98139 (orange)

- sp. JLC5705

- sp. JLC6113

Boea

- *hygroscopica*

Briggsia (A,R)

muscicola

Chirita

- *asperifolia*

- *balansae*

- *caliginosa* (LM)

- *flavimaculata* USBRG94-085 (R)

- *gemella*

- *involutrata* (F,L)

- *involutrata* (dark blue)

- *lavandulacea* (LM)

- *linearifolia*

- *longgangensis*

- *micromusa* (F,L)

- *pumila* (F,L)

- *pumila* USBRG2000-18 (F,LM)

- *sclerophylla*

- *sericea* (L,R)

- *spadiciformis*

- *subrhomboidea* (F,R,L)

- *tamiana* USBRG98-080 (F,R,P)

- *viola*

- species (Thailand)

- species (blue) from Phuket

Chrysothemis (F,LM)

friedrichsthaliana

- *pulchella* (Ecuador)

villosa

Codonanthe (B)

carnosa

corniculata

crassifolia

crassifolia 'Cranberry'

devosiana (digna)

devosiana (digna 'Moonlight')
devosiana (paula)
erubescens
gracilis
 • *venosa*

***Columnnea* (B)**

ambigua (*Trichantha*) 'El Yunque'
 WEK96163
angustata (*Pentadenia*)
arguta
byrsina (*Pentadenia*) (L)
citriflora (*Trichantha citrina*)
crassicaulis (*Pentadenia*)
crassifolia
 • *dodsonii*
eburnea
erythrophaea
fawcettii
 • *filamentosa* (*Trichantha filifera*)
 JLC6500
flexiflora (*Trichantha dodsonii*) (LM)
glicensteinii
hirta
hirta GRF9493
 • *inaequilatera* JLC6072
 • *linearis*
maculata
medicinalis (*Dalbergaria*) GRF9507
nicaraguensis CR92F16
nicaraguensis GRF94105
 • *oerstediana*
orientandina (*Pentadenia*) (LM)
ornata (*Dalbergaria*) GRF2665
oxyphylla
polyantha (*Dalbergaria*)
purpusii
rileyi (*Pentadenia*) GRF86243 (LM)
sanguinea (*Dalbergaria*)
sanguinea (*Dalbergaria*) 'Orange
 King' GRF9492
schiedeana
spathulata (*Pentadenia*) GRF9503
 (LM)
spathulata (*Pentadenia microsepala*)
 W1837
spathulata (*Pentadenia zapotalana*)
strigosa (*Pentadenia*) GRF95154
sulfurea
 • *tandapiana*
 • cf. *isernii* JLC6253

Corytoplectus

capitatus (LM)

capitatus G291

cutucuensis (L)

cutucuensis GRF9794

riceanus GRF9654 (M)

Cyrtandra

cupulata (G,H,MT)

Dalbergaria (see *Columnnea*)

Diastema (D,F,P)

vexans

Didissandra

• *frutescens* (H,M)

Didymocarpus

• *sulfureus*

Drymonia

affinis GRF98109

coccinea GRF9873

doratostyla GRF9674 (B)

ecuadorensis 'Red Elegance' (LM)

macrophylla (M)

mortoniana (L)

pulchra GRF98113

serrulata (B)

serrulata GRF9752

strigosa (B)

strigosa GRF1912

• cf. *ecuadorensis* JLC6185

• sp. aff. *teuscheri* JLC6119

(*Alloplectus*)

sp. (*umecta* ined.) (B)

Episcia (H,L,B,F)

• *xantha*

Gasteranthus

• *atratus*

Gesneria (H,F,L)

christii

citrina

• *cuneifolia*

• *cuneifolia* WEK96151

• *cuneifolia* WEK96152

• *cuneifolia* WEK96155

• *cuneifolia* WEK96157

• *cuneifolia* WEK96158

• *cuneifolia* 'Esperanza'

• *cuneifolia* 'Quebradillas'

pedunculosa USBRG97-102 (S,T)

humilis

• *reticulata*

• *reticulata* 'El Yunque'

• *rupincola*

ventricosa (M)

***Glossoloma* (*Alloplectus*)**

bolivianum USBRG95-140 (M)

• *ichthyoderma* JLC5626

• *martinianum* JLC6043

sp. aff. *panamense* GRF9781

(orange)

sp. aff. *purpureum* USBRG98-030

sp. aff. *schultzii* GRF97103

***Gloxinella* (*Gloxinia*)** (D)

lindeniana (F,L)

Gloxinia (D)

perennis (LM)

perennis 'Insignis' (L)

xanthophylla (*Anodiscus*) (M)

- Gloxiniopsis** (*Gloxinia*) (D)
racemosa (L)
- Haberlea** (A,R)
rhodopensis
- Hemiboea** (D)
subcapitata (L)
- Henckelia**
 - *incana* (H,P)
 - *malayana* (H,M)
- Heppiella** (D)
ulmifolia GRF98172
- Kohleria** (D)
hirsuta
peruviana
spicata (M)
- Lembocarpus**
 - *amoenus* USBRG 02-110X
- Monopyle**
macrocarpa GRF94123
- Moussonia** (M)
deppeana
 - *elegans*
 - *elegans* GRF9407
- Napeanthus** (H)
costaricensis (F,P)
- Nautilocalyx**
adenosiphon
 - *mellitifolius*
- Nematanthus**
albus (sp. "Santa Teresa") (B)
australis (B)
 - *brasiliensis*
 - *corticola* (B)
 - *fissus* GRF9938
 - *fluminensis*
 - *fritschii*
 - *punctatus* MP0052
 - *strigillosus* AC1434 (B)
 - *wettsteinii* (B)
 - *wiehleri* MP0050 (sp. aff. *albus*)
- Neomortonia**
nummularia
- Ornithoboea**
wildeana (LM)
- Paraboea**
 - *capitata*
- Paliavana** (S,T)
prasinata
prasinata GRF732
 - *plumerioides* (Cabral)
 - *tenuiflora*
- Paradrymonia**
 - *ciliosa*
 - *decurrens* (L)
 - sp. JLC5731 (F,P)
- Pentadenia** (see *Columnea*)
- Phinaea** (D,F,P)
albolineata
divaricata
multiflora 'Tracery'
- Ramonda** (A,R)
 - *myconi*
 - *myconi* —
white
lavender
pink
 - clone G
- Rhynchoglossum** (H,L)
gardneri
- Rhytidophyllum** (G,H,S,T)
auriculatum
tomentosum
villosulum
- Rufodorsia** (F,LM)
 - *minor*
- Saintpaulia** (F,R)
 - *diplotricha* Punter #7
 - *orbicularis*
 - *rupicola* 'Cha Simba'
 - *shumensis*
 - *velutina*
- Seemannia** (*Gloxinia*) (D)
 - *purpurascens* (Bolivia) (M)
 - *gymnostoma* (LM)
 - *sylvatica* GRF9943 (Brazil)
 - *sylvatica* USBRG96-002 (Bolivia)
- Sinningia** (D)
aggregata (M)
aghensis (T)
aghensis AC2356
allagophylla (MT)
allagophylla GRF9922
allagophylla GRF9929
allagophylla GRF9968
allagophylla (yellow)
 - *amambayensis* (L)
 - *araneosa* (F,L)
 - *brasiliensis* (M)
 - *brasiliensis* 'Verde'
 - *brasiliensis* AC1314
 - *bulbosa* (T)
 - *calcaria* MP891 (F,L)
 - *canescens* (D,LM)
 - *carangolensis* (M)
 - *cardinalis* (F,LM)
 - *cardinalis* (compact) (F,LM)
 - *cardinalis* (dark calyx) (LM)
 - *cardinalis* (orange)
 - *cardinalis* (pink)
 - *cardinalis* 'Innocent'
 - *cardinalis* 'Skydiver' (LM)
 - *cochlearis*
 - *conspicua* (F,L)
 - *conspicua* GRF 9942
 - *cooperi* (LM)
 - *cooperi* AC1522 (M)

- curtiflora* (T)
- curtiflora* GRF9927
- defoliata*
- douglasii* GRF91188 (LM)
- douglasii* GRF9936 (LM)
- elator* AC1409 (M)
- elator* GRF9963
- eumorpha* /Saltao (L)
- eumorpha* (lavender) (F,L)
- eumorpha* (pink)
- eumorpha* (white)
- gigantifolia*
- glazioviana* (L)
- *guttata* (LM)
- harleyi* MP 482
- hatschbachii* (L)
- hatschbachii* 'Iporanga' (D,LM)
- *hirsuta*
- iarae* (F,L)
- *incarnata* (S,MT)
- insularis* (LM)
- leopoldii* (F,L)
- leucotricha* (F,L)
- leucotricha* cv. 'Max Dekking' (M)
- lineata* (LM)
- lineata* GRF9920 (LM)
- lineata* (highly spotted)
- macrophylla*
- macropoda* (M)
- macrostachya* (LM)
- magnifica* GRF91121 (pink) (LM)
- magnifica* GRF91134 (red)
- *mauroana* (D,M)
- mauroana* GRF9964
- micans* MP891 (LM)
- nivalis* AC1460 (L)
- nordestina*
- piresiana* (L)
- *pusilla* (F,P)
- *pusilla* 'White Sprite' (F,P)
- reitzii* (M)
- sceptrum* (T)
- sceptrum* AC2406 (T)
- sellovii* (MT)
- sellovii* GRF9919
- sellovii* Bolivia' USBRG96-003
- *sellovii* 'Purple Rain'
- *speciosa* 'Cabo Frio' (F,L)
- speciosa* 'Carangola'
- speciosa* 'Domingos Martins'
- *speciosa* 'Lavender Queen'
- speciosa* 'Sao Conrado'
- speciosa* AC1652
- *speciosa* AC1503
- sulcata* (LM)
- tubiflora* (S,MT)
- tuberosa*
- warmingii* (T)
- warmingii* GRF9921
- sp. aff. *aggregata* (yellow) (M)
- sp. aff. *reitzii* 'Black Hill' (M)
- sp. aff. *reitzii* GRF9914 (magenta)
- sp. aff. *warmingii* from Ilhabela MP631
- sp. "Esmeril" (L)
- sp. "Gertiana"
- sp. "Globulosa"
- sp. "Ibitioca" (LM)
- sp. "Petropolis"
- sp. "Rio das Pedras" MP1094 (F,P)
- sp. "Rio das Pedras" dark (F,P)
- sp. "Waechter" (LM)
- mixed species
- Smithiantha* (D)**
- *canarina* GRF9105 (F,LM)
- *laui* GRF9117 (F,L)
- *multiflora* GRF9121 (F,LM)
- *multiflora* GRF9122 (F,LM)
- *zebrina* GRF9104 (M)
- Streptocarpus***
- buchananii* (B)
- candidus* (F,R)
- confusus* (U)
- *confusus* ssp. *confusus* /Swaziland
- cooksonii* (dark purple)
- cooperi* (U)
- cyanandrus* (F,P)
- *cyaneus* (blue) (R)
- *cyaneus* (blue/long corolla)
- *cyaneus* (lilac)
- daviesii* (F,U)
- denticulatus* (U)
- *dunnii* (U)
- eylesii* (U)
- fanniniae* (R)
- fasciatus* (R)
- fasciatus* /Krokodilpoort, E. Transvaal (R)
- floribundus* (R)
- formosus* (R)
- formosus* /E. Cape, Transkei
- gardenii* (F,L)
- goetzei* (U)
- grandis* (U)
- grandis* (blue form)
- haygarthii* (F,U)
- *haygarthii* JT04-03D/Transkei Coast (F,U)
- haygarthii* /Mkambati, Transkei
- holstii* (B,L)
- johannis* (F,R)
- johannis* /Komga, E. Cape
- johannis* /Weza, S. Natal (R)
- sp. aff. *johannis* (F,R)
- kentaniensis*
- *kentaniensis* (N. Kei River)

- kirkii* (F,L)
- *kunhardtii*
- *meyeri* /SE Transvaal (R)
- meyeri* /NE Cape Province
- modestus* (R)
- *modestus* /Magwa Falls, Transkei (R)
- muscosus* (L)
- nobilis* (M)
- pallidiflorus* (F,LM)
- parviflorus* (R)
- parviflorus* (mauve)
- *parviflorus* (white) (R)
- parviflorus* (white/mauve)
- *parviflorus* ssp. *parviflorus*
- /Limpopo Province
- pentherianus* (F,L)
- polyanthus* (F,L)
- polyanthus* subsp. *comptonii*
- polyanthus* subsp. *polyanthus*
- polyanthus* subsp. *polyanthus* /lg fl
- polyanthus* subsp. *polyanthus* /Valley
- of 1000 Hills, Natal
- porphyrostachys* (U)
- primulifolius* (F,R)
- primulifolius* /Valley of 1000 Hills
- prolixus* (F,U)
- pumilus* (F,P)
- rexii* (F,L,R)
- rexii* (white)
- rexii* (pale blue/long corolla)
- rexii* (white/blue mix)
- rimicola* (F,P)
- roseoalbus* (F,R)
- saundersii* (U)
- saxorum* (B)
- thompsonii* (B,L)
- trabeculatus* (U)
- *vandeleurii* (U)
- variabilis* (F,R)
- wendlandii* (U)
- wilmsii* (U)
- wilmsii* /Long Tom Pass

Titanotrichum

oldhamii (propagules)

Trichantha (see *Columnea*)

Vanhouttea (S,T)

- *brueggeri*
- *pendula*

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Solenophora: a Little-Known Genus of Central American Gesneriaceae

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The genus *Solenophora* is one of the least known genera of neotropical Gesneriaceae. At the same time, it is one of the most interesting genera, exhibiting many uncommon features. Until recently, its taxonomy was in an extremely unsatisfactory condition. The recent revision of the German botanists Maximilian Weigend and Harald Förther (Weigend & Förther 2002) brought a much-needed critical compilation of the species. They recognized 16 species in the genus, two (and a subspecies of *S. calycosa*) being described as new. From these species, they knew only two from the field. This shows the fragmentary knowledge of the genus as a whole, and on many occasions Weigend & Förther had to point out the need for field studies. It is not only the incomplete knowledge of the species and their delimitation which renders *Solenophora* an ill-known genus, but also the incomplete knowledge of certain morphological features, e.g., the fruits.

This article will survey the genus briefly. The taxonomic part and the simple key are essentially based on the paper of Weigend & Förther (l.c.). Some of the open problems are pointed out in order to stimulate field observations and new collections.

Etymology: The genus *Solenophora* was established in 1840 by George Bentham (*Plantae Hartwegianae*, p. 68, 1840). Neither Bentham nor later authors explained the name, but this can be easily derived from the Greek σωλην, *solēn* = tube, and φερειν, *ferēin* = bear, carry. It is, however, not absolutely clear what the name alludes to. It may refer to the tubular calyx or to the tubular corolla (both options can be deduced from Bentham's description); but as the calyx is persistent and forms a conspicuous crown at the top of the ripening fruit, it is more probable that it refers to the calyx.

Taxonomic history: Bentham (1840) established the genus for the accommodation of a single species, *S. coccinea*, collected by Karl Theodor Hartweg (1812-1871), a German botanist collecting plants in Mexico for the Royal Horticultural Society London. This is the type species of the genus. Two years later, a relevant species was described by Martens & Galeotti (1842), which they placed in the genus *Besleria*: *B. insignis*. In 1848, both the Austrian botanist Eduard Fenzl and the French botanist Decaisne independently realized that this species was misplaced in *Besleria* and established the new genera *Arctocalyx* ("bear calyx", in reference to the densely hairy calyx) and *Hippodamia* (named after a woman of Greek mythology), respectively. The Berlin botanist J. Hanstein (1865) discovered that this species belonged to Bentham's genus *Solenophora*. He also transferred the second species described by Fenzl in *Arctocalyx* (*A. endlicheriana*) and validated another species named *Arctocalyx obscurus* by the Danish botanist Oersted. From that date onwards, all *Solenophora* species described were placed in the correct genus.

In their much-needed revision, Weigend & Förther (2002) sank a number of species into synonymy. The accepted species are listed and briefly commented on below.

Distribution: *Solenophora* is restricted to Central America, ranging from Mexico to western Panama (*S. calycosa* subsp. *australis*). The center of diversity is clearly the area of southern Mexico and northern Guatemala. Only 3 of the 16 species are found south of Guatemala, and only one (*S. calycosa*) exclusively south of Guatemala.

Ecology: The species are essentially restricted to undisturbed tropical and subtropical montane forest (with oaks, pines, firs, *Podocarpus* – another gymnosperm, wild avocados, *Magnolia*, etc., as characteristic components) with regular rainfall throughout the year. They require low temperatures and are found in shady localities, usually in ravines and along forest streams. Growth along streams or near waterfalls ensures constant mist and high humidity. The plants are extremely sensitive to drying, and this is certainly one of the reasons that *Solenophora* species are so rarely found in cultivation.

Habit: It is difficult to find an appropriate term to describe the habit of *Solenophora*. The specimens of most species are two-meter or several-meter (up to 9) tall plants and thus reach the height of small trees. However, the rich branching, often starting from the base, makes the plants look rather like giant shrubs. The stems are thick, but in contrast to true shrubs, bendable, elastic or brittle. The wood is conspicuously soft and tender, unlike a true shrub. There is little doubt that the woodiness of *Solenophora* is secondary, derived from a herbaceous texture. So we can agree with Weigend & Förther (2002), who describe the plants as "lignescent herbs". This is backed by the discovery of *S. modesta*, which is a low plant, usually between 30 and 50 cm high. Also the little known *S. abietorum* seems to be a low plant, to 60 cm tall, and such species seem to join with the typical habit of other Central American Gesneriaceae. Nonetheless, typical features of these plants, such as scaly rhizomes, are lacking.

Flowers and pollination: The flowers are usually conspicuous, with a yellow, orange or red corolla, eventually with dark markings on the limb. The calyx is tubular, with usually short lobes (only in *S. coccinea* the long and narrow lobes equal the length of the tube), its color is usually green but may also be dark purple or yellow (*S. tuxtensis*). Altogether, the flowers clearly exhibit a bird-pollination syndrome. Observations of actual pollination seem to be very scarce. Förther (in Weigend & Förther 2002) has observed hummingbirds visiting the flowers of the newly described *S. schleehaufii* and thus verifies the pollination mode concluded from the floral characters.

Fruit structure and seed dispersal: The fruit structure has remained almost unknown so far. Fritsch (1893/94), who established tribe Solenophoreae for *Solenophora* and the (congeneric) *Hippodamia*, says clearly that the fruit was unknown. Later, the term "capsule" or "turbinate capsule" has been used for describing the fruit. Also Weigend & Förther (2002) do not comment on the fruits in the general part and simply refer to them as "capsules" in the species descriptions. Fruits of *S. calycosa* have been spotted and analyzed recently by the present authors. In short, they represent capsules with a fleshy, orange-colored fruit wall. The fruit wall falls into pieces, exposing a red, globose placenta with numerous seeds covering the surface. There is little doubt that the colorful fruit and its seed-bearing remnants, respectively, are attractive to birds and/or small animals. (See photo on page 17.)

Taxonomic position of the genus: On the one hand, the inferior ovary places *Solenophora* in tribe Gloxinieae, however, the strange morphology and the lack of appropriate other data makes it difficult to relate *Solenophora* to other genera of this tribe. The isolated position was recognized early. Oersted (1858) established a subtribe *Solenophorinae* ("*Solenophoreae*") in his tribe *Rhytidophylleae*, containing only *Solenophora* and *Arctocalyx* (a synonym of *Solenophora*). Fritsch (1893-94) accommodated *Solenophora* and *Hippodamia* (also a synonym of *Solenophora*) in a distinct tribe *Solenophoreae* of subfam. *Gesnerioideae*. In a morphological-cladistic analysis of Jim Smith (1996), *Solenophora* emerged as a genus sister to *Paliavana*, *Sinningia* (tribe Sinningieae) and *Monopyle* (tribe Gloxinieae). In molecular analyses, *Solenophora* turned up as sister to *Codonanthe* (tribe Episcieae!) (Smith et al. 1997, Smith 2000) or *Diastema* (Smith & Atkinson 1998). The molecular studies of Zimmer et al. (2002), Roalson et al. (2003), and Clark & Zimmer (2003) did not include *Solenophora*. The most recent analysis (Roalson et al. 2005) did, but none of the molecular markers used (nrDNA ITS and cpDNA trnL-F) gave an unequivocal indication what the affinities of *Solenophora* are. There is some guess that *Solenophora* might be close to *Achimenes*, but Roalson et al. (l.c.: 403) say: "The monophyly of *Achimenes*, and its relationship to the genera *Phinaea* and *Solenophora*, is unclear at this time". In conclusion, we only can repeat the introductory statement: *Solenophora* is a true member of tribe Gloxinieae, but its affinity here is still unresolved.

Infrageneric relationships: Apart from *S. coccinea* (relationship obscure) and *S. maculata* (allied to *S. calycosa* group?), the species can be well assigned to three groups:

(a) ***S. purpusii* group** (calyx strongly asymmetrical, with a deep incision on one side): *S. purpusii*, *S. schleehaufii*;

(b) ***S. obscura* group** (calyx radially symmetrical; inferior ovary strongly set off from calyx tube by a distinct constriction, calyx radially symmetrical, calyx tube often yellowish, red or beige in color, corolla tube 18-45 mm long): *S. erubescens*, *S. chiapasensis*, *S. tuerckheimiana*, *S. obscura*, *S. abietorum*, *S. tuxtlensis*, *S. modesta*;

(c) ***S. calycosa* group** (calyx radially symmetrical; inferior ovary not strongly set off from calyx tube, calyx tube always dark green, corolla tube (45-)50-80mm long): *S. calycosa*, *S. toucana*, *S. pirana*, *S. insignis*, *S. glomerata*.

The species (arrangement according to assumed affinities, after Weigend & Förther 2002):

S. coccinea Benth.: Mexico (Oaxaca), only known from two collections; apparently extremely rare; montane forests; unmistakable by the long and narrow calyx lobes equaling the calyx tube in length.

S. maculata D.N. Gibson: Guatemala (San Marcos: Volcán Tajumulco), only known from the type collection; characterized by the rather short corolla tube (less than twice as long as calyx) and long exerted style; possibly related to *S. calycosa* group, field studies needed.

S. erubescens Donn. Sm.: Guatemala; damp or wet montane forests; characterized by the absence of hairs from all parts of the plant.

S. chiapasensis D.N. Gibson: Mexico (Chiapas); montane rain and cloud forests with oaks, pines, firs, *Magnolia*, wild avocados, etc.; 2000-3000 m;

superficially close to and sympatric with *S. modesta*, possibly ecologically separated; field studies needed.

- S. tuerckheimiana* Donn. Sm.: Guatemala; montane forest, in damp or wet ravines; 1600-1800 m.
- S. obscura* Hanst.: Mexico, Guatemala, Honduras; damp or wet montane forests, in ravines or along rivulets, 300-2000 m; formerly thought to be restricted to Mexico, but distribution extending to Guatemala and Honduras by the inclusion of the conspecific *S. wilsonii* Standl. (1937); characterized by conspicuous bracteoles within the inflorescences, short pedicels (less than 10 mm long) and yellow corolla.
- S. abietorum* Standl. & Steyerl.: Guatemala (Sierra de los Cuchumatanes); damp cloud forest dominated by firs (*Abies*), 1500-2800 m; well defined by an extremely dense indumentum and canescent young leaves.
- S. tuxtliensis* Ramírez-Roa & Ibarra-Manríquez: Mexico; one of the northernmost and most characteristic species; montane cloud forest; 200-1500 m; characterized by yellow calyx and corolla, the limb of which is spotted with dark markings.
- S. modesta* Weigend & Förther: Mexico (Chiapas); montane forest with oaks, pines, *Podocarpus* and *Magnolia*; c. 2000 m; characterized by the small habit (plants usually 30-50 cm tall; leaves much smaller than in other species, calyx short and wide; approaching *S. erubescens* in the sparse indumentum, but probably most closely allied to *S. chiapasensis* from same area.
- S. purpusii* Brandegee (incl. *S. obliqua* D.L. Denham & D.N. Gibson): Mexico to Guatemala; damp or wet montane forests, often dominating in thickets along ravines or rivulets, 1000-2700 (-3000) m; well defined by the asymmetrical calyx tube, otherwise found only in the following *S. schleehaufii*, which is, however, densely pubescent (*S. purpusii*: glabrous), but differing from that species in the glabrous stems and calyx.
- S. schleehaufii* Weigend & Förther: Guatemala (Alta Verapaz); cloud forest dominated by oaks, wild avocados (*Persea*), the primitive angiosperm *Drimys* and the gymnosperm *Podocarpus*; shaded places along barrancos or ravines and rivulets; 1800-2400 m; calyx as in *S. purpusii*, but (like the stems) densely pubescent.
- S. calycosa* Donn. Sm.: Costa Rica and western Panama; three subspecies can be recognized:
- (1) **subsp. calycosa**: Costa Rica (numerous collections from montane areas, e.g. Monteverde, Volcán Poás, V. Barva, V. Irazú, Cordillera de Talamanca, etc.) and adjacent Panama (Chiriquí); characterized by dense indumentum;
 - (2) **subsp. australis** (C.V. Morton) Weigend & Förther: western Panama (Chiriquí and Bocas del Toro); cloud forest, e.g. with *Weinmannia* and *Podocarpus*; along streams, 1400-3000 m; indumentum less dense;
 - (3) **subsp. purpurascens** Weigend & Förther: Costa Rica (San José); cloud forests, growing in quebradas or along rivulets, 1400-1700 m; sympatric with ssp. *calycosa*, but differing in the purple undersides of the leaves and the purple calyx. "It would be clearly desirable to study this taxon closely in the wild and compare it with the sympatric subsp. *calycosa*." (Weigend & Förther 2002, p. 68).

- S. toucana* D.L. Denham & D.N. Gibson: El Salvador and Honduras; fairly widespread; evergreen broad-leaved montane forest with oaks and the gymnosperm *Podocarpus*, barrancos and in dense and wet cloud forest; 1800-2400 m; closely related to *S. calycosa*, differing in the subtruncate calyx and much smaller flowers.
- S. pirana* C.V. Morton: Mexico and Guatemala; montane rain forest with oaks, pines and many others; mostly in wet ravines, 2000-3900 m; characterized by very large flowers combined with long peduncles; over its entire range sympatric with other *Solenophora* species, but no intermediates have been found so far.
- S. insignis* (M. Martens & Galeotti) Hanst.: Mexico; montane rain forest with oaks, pines, hornbeams, wild avocados, and many others; along rivulets, 1200-2600 m; defined by the very short and often (sub-)truncate calyx combined with a very long corolla with a usually laciniate limb: the northernmost specimens (Mexico: Guerrero) have an entire (not lacinate) limb and a distinctly longer calyx; their taxonomic status needs clarification.
- S. glomerata* Weigend & Förther: Mexico (Chiapas); montane rain forest along ravines; 1800-2000 m; the specimens of this species have been formerly identified either as *S. toucana* or *S. purpusii*, the dense inflorescences with short peduncles and pedicels (giving the inflorescences a glomerate appearance), the conspicuous bracts (bracteoles) and the indumentum, however, warrant separation.

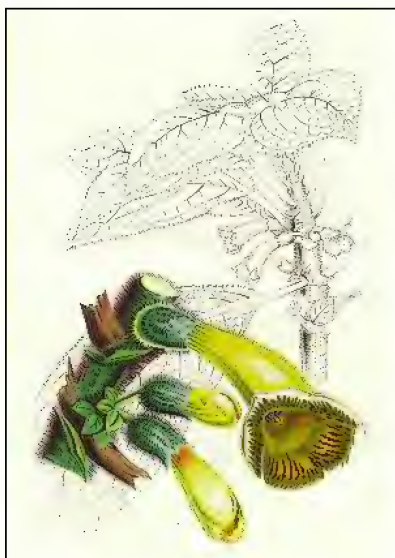
Simple synoptical key to the species of *Solenophora*

(based on Weigend & Förther 2002, modified and simplified)

- | | | | |
|----|---|----|---|
| 1 | Calyx asymmetrical, with deep incision on one side.
. (<i>S. purpusii</i> group) | 6 | Peduncle longer than 30 mm, ovary densely pubescent.
. <i>S. pirana</i> |
| 2 | Stems glabrous or slightly puberulous, calyx glabrous, 25-45 mm long <i>S. purpusii</i> | 6* | Peduncle shorter than 30 mm, if longer then ovary glabrous |
| 2* | Stems and calyx densely pubescent, calyx 20-25 mm long
. <i>S. schlehaufii</i> | 7 | Calyx + ovary 10-15 (-20) mm long, ovary rounded, calyx lobes spreading or reflexed.
. <i>S. insignis</i> |
| 1* | Calyx radially symmetrical, incisions of equal length | 7* | Calyx + ovary (20-) 25-40 mm long, ovary rounded or conical; calyx lobes usually erect |
| 3 | Free parts of calyx lobes very long (20-30 mm), of same length as calyx tube <i>S. coccinea</i> | 8 | Axillary inflorescences of 4-12 flowers, peduncles short, stout, 5-10 mm long; bracts conspicuous, marginally ciliate; pedicels 5-10 (-13) mm long; calyx conical. <i>S. glomerata</i> |
| 3* | Free part of calyx lobes short (to 10 mm), shorter than calyx tube | 8* | Axillary inflorescences of 1-2 (4) flowers, peduncle, if present, thin, 20-50 mm long; bracts inconspicuous, marginally not ciliate; pedicels 15-30 mm long; calyx cylindrical, from conical base |
| 4 | Corolla tube less than twice as long as calyx, style long exserted <i>S. maculata</i> | | |
| 4* | Corolla tube more than twice as long as calyx, style included | | |
| 5 | Inferior ovary not clearly marked off from calyx
. (<i>S. calycosa</i> group) | | |



Solenophora calycosa, Madre selva, Costa Rica
(photo by A. Weissenhofer)



Solenophora insignis illustrated
as *Arctocalyx endlicherianus*
in Flore des Serres, 1850



Colorful fruit of *Solenophora calycosa* (photographed in Panama
by John L. Clark in 2003)

- 9 Calyx subtruncate, lobes less than 3 mm long *S. toucana*
- 9* Calyx deeply lobed, lobes 6-12 mm long *S. calycosa*
- 5* Inferior ovary distinctly marked off from calyx
 (*S. obscura* group)
- 10 Plant entirely glabrous
 *S. erubescens*
- 10* Plant (at least calyx) pubescent
- 11 Leaves with scattered uniseriate hairs on upper side, glabrous near margin; ovary covered with dark red hairs, calyx short (less than 10 mm), lobes (sub) glabrous *S. modesta*
- 11* Leaves with numerous uniseriate hairs on upper side, densely pubescent near margin; ovary hairs not dark red; calyx 10-20 mm, lobes pubescent
- 12 Calyx 30-37 mm long, yellowish, occasionally flushed red; corolla tube 40-45 mm long
 *S. tuxtlensis*
- 12* Calyx 10-20 (-35) mm long, dark green or dark greenish-red; corolla tube 25-30 (-40) mm long
- 13 Inflorescences with long peduncle (usually more than 40 mm long) *S. tuerckheimiana*
- 13* Inflorescences without or with short peduncle (less than 20 mm long)
- 14 Leaves very densely pubescent, young leaves canescent
 *S. abietorum*
- 14* Leaves sparsely pubescent, young leaves not canescent
- 15 Bracteoles inconspicuous; pedicels 15-20 mm long; calyx reddish to red; corolla orange
 *S. chiapasensis*
- 15* Bracteoles conspicuous, pedicels less than 10 mm long; calyx green; corolla yellow.
 *S. obscura*
- Subspecies of *S. calycosa***
- 1 Leaf underside and calyx green, ovary with numerous hairs
 **subsp. *calycosa***
- 1* Leaf underside and calyx green, ovary glabrous.
 **subsp. *australis***
- 1** Leaf underside and calyx purple, ovary with scattered hairs
 **subsp. *purpurascens***

Cultivated species. To the best of the authors' knowledge, only one species of *Solenophora* has been introduced into general cultivation: *S. tuxtlensis*. A photo of a flower (taken by Bob Stewart) is posted in Ronald Myhr's gesneriad website <<http://www.gesneriads.ca/solenoph.htm>>. The appended comment points to the difficulties of cultivation: "Difficult to keep alive because it is extremely touchy about moisture, it must never dry out, even a little." (See article and photos on pages 20-21.) Moreover, ordinary glasshouses are usually too warm for *Solenophora*. These plants need constantly low temperatures, combined with high humidity, a condition which is rarely found in glasshouses in which tropical plants are grown. Although named cultivars are unknown in *Solenophora*, two attempts at intergeneric crosses have been made. Wiehler, in *Selbyana* 1: 407. 1976, reports of his crosses of *Moussonia hirsutissima* with both *S. insignis* and a *S. species* (now *S. tuxtlensis*). He was able to get living plants of the hybrids which he called *×Moussonophora*, but the plants did not survive.

References:

- Bentham, G., 1840: *Solenophora*. In Bentham, G., 1839-1857: *Plantae Hartwegianae*. London (U.K.): G. Pamplin.
- Clark, J.L., & E.A. Zimmer. 2003. A preliminary phylogeny of *Alloplectus* (Gesneriaceae): implications for the evolution of flower resupination. *Syst. Bot.* 28: 365-375.

- Decaisne, J., 1848. [Gesneriaceae]. Rev. Hort. 20 (sér. 3, 2): 461-469.
- Fenzl, E., 1848a. Eine neue Gesneraceen-Gattung aus der Abteilung der Gesnereen. Allg. Gartenzeitung 16: 305-307.
- Fritsch, K. 1893-94. Gesneriaceae, pp. 133-185, 81 figures. In: Engler, A. & K. Prantl, Die Nat. Pflanzenfam., Vol. 4 (3b). Leipzig, Germany: Engelmann.
- Hanstein, J., 1865. Die Gesneraceen des Königlichen Herbariums und der Gärten zu Berlin, nebst monographischer Uebersicht der Familie im Ganzen, II. Abschnitt. Gattungen und Arten. Drittes Stück. Die Eugesnereen, Rhytidophyllen, und Beslerieen. Linnaea 34: 225-462.
- Martens, M. & H. Galeotti. 1842. Gesneriaceae, In: Enumeratio synoptica plantarum phanerogamicarum ab Henrico Galeotti in regionibus Mexicanus collectarum. Bull. Acad. Roy. Sci. Bruxelles 9: 32-39.
- Oersted, A.S. 1861. Centralamerikas Gesneraceer, et systematisk, plantegeographisk Bidrag til Centralamerikas Flora. Konegl. Danske Vidensk. Selsk. Skr., Naturvidensk. Math. Afd. Ser. 5, 5: 77-152, pl. 1-11.
- Roalson, E.H., J.K. Boggan, L.E. Skog, & E.A. Zimmer. 2005. Untangling the Gloxinieae (Gesneriaceae). I. Phylogenetic patterns and generic boundaries inferred from nuclear, chloroplast, and morphological data sets. Taxon 54: 389-410.
- Skog, L.E., R.H. Roalson, J.K. Boggan, & E.A. Zimmer. 2002. The changing relationships within the Gesnerioideae, particularly the Gloxinieae. p. 8. In: Anonymous, Gesneriaceae Workshop [program and abstracts]. Scotland, U.K.: Royal Botanic Garden, Edinburgh.
- Smith, J.F. 1997. Tribal relationships within Gesneriaceae: a cladistic analysis of morphological data. Syst. Bot. 21: 497-513.
- Smith, J.F., J.C. Wolfram, K.D. Brown, C.L. Carroll, & D.S. Denton. 1997a. Tribal relationships in the Gesneriaceae: evidence from DNA sequences of the chloroplast gene *ndhF*. Ann. Missouri Bot. Gard. 84: 50-66.
- Smith, J.F. & S. Atkinson. 1998. Phylogenetic analysis of the tribes Gloxinieae and Gesnerieae (Gesneriaceae): data from *ndhF* sequences. Selbyana 19: 122-131.
- Smith, J.F. & C.L. Carroll. 1997. A cladistic analysis of the tribe Episcieae (Gesneriaceae) based on *ndhF* sequences: origin of morphological characters. Syst. Bot. 22: 713-724.
- Weber, A. 2004. Gesneriaceae. In: Kubitzki, K. (ed.): The families and genera of vascular plants. Vol. 7. Flowering plants. Dicotyledons. Lamiales (except Acanthaceae including Avicenniaceae), pp. 63-158. vol. ed. J.W. Kadereit. – Berlin/Heidelberg: Springer.
- Weigend, M. & H. Förther, 2002. A revision of the Central American genus *Solenophora* (Gesneriaceae). Harvard Pap. Bot. 7(1): 37-78.
- Zimmer, E.A., E.H. Roalson, L.E. Skog, J.K. Boggan, & A. Idnurm. 2002. Phylogenetic relationships in the Gesnerioideae (Gesneriaceae) based on nrDNA ITS and cpDNA *trnL-F* and *trnE-T* spacer region sequences. Amer. J. Bot. 89: 296-311, supplemental data pp. 1-5.

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Hints on Growing Solenophora

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Stow, Massachusetts, USA

I can provide two hints on growing *Solenophora*; one from collection data and the other from unfortunate experience.

Collection data indicates that plants of this genus are found almost exclusively at rather high elevation, generally in cloud forest conditions. The plants will therefore expect cool conditions and considerable humidity. They probably want below 60°F at night. Most indoor growers are likely to have trouble with this.

We once had *Solenophora tuxtensis* which is just one of the interesting things to look for if anyone is going collecting in the mountains near Veracruz, Mexico. Experience shows that the plant will wilt instantly if the soil is allowed to become dry, and the plant does not recover well from wilting.

Encountering Solenophora in Panama

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The genus *Solenophora* was another unknown to me when I first traveled to the tropics. It really was amazing to discover how much I didn't know as I experienced that first trip back in April of 1985. I had a wonderful mentor and collecting partner in Jim Folsom. This was before his days as director of Huntington Gardens, and he had been collecting material for the Flora of Panama project for several years, I believe, at least off and on.

We were into the second half of our trip, as I recall, and had finally made our way over to Bocas del Toro and Chiriquí provinces. That morning we went from sea level (with *Drymonia conchocalyx* and *Columnnea tulae* var. *tomentulosa*) up into cloud forest looking for the infamous pink-flowered form of *Columnnea microcalyx* and *C. flaccida*, neither of which we saw that day. However, as we were hiking and wandering up in the Cerro Punta area, we did come across some weakly branching low trees with large Catalpa-like leaves only larger. When I say weakly branched, I don't mean that the trees didn't branch much. Rather, there were a number of branches fairly low, and the branches seemed barely able to hold up the eight to a dozen pairs of large roundish leaves out towards their tips.

I was just noticing the flowers when Jim pointed out that this tree was indeed a gesneriad! I couldn't believe it at first, but certainly the flowers looked the part – orange, hairy, tubular, large flowers, close to three inches long and at least half that much across the opening! This was *Solenophora calycosa*. I don't remember much in the way of purple spotting around the opening or on the interior of the flower – the flowers we saw were pretty uniformly orange. I haven't seen any other images that look quite like what we saw in terms of size or color. (While the pictures in the INBio publication "Gesneriads of Costa Rica", Ricardo Kriebel Haehner, 2006, are quite fine

and much clearer than mine, the color is different and they don't provide nearly the same sense of the size of the plants that I saw.) It was misting by this point, and so we were moving on pretty quickly. But these gesneriad trees with their large leaves and large flowers, up in the cool and the mist of the Panamanian cloud forest and surrounded by other wonderful plants (some apparently still new to science at least at that point), created a scene I can still easily bring to mind more than twenty years later... and am not likely to forget any time soon.



Solenophora calycosa (Cerro Punta, Panama) photographed by Jonathan Ertelt in 1985



Solenophora calycosa (Chiriqui, Panama) photographed by John L. Clark in 2003



Solenophora tuxtlensis grown and photographed by Bob Stewart in 1982



Searches for *Solenophora* in Mexico

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My late husband Dale Denham, a pharmacist and research associate of the herbarium museum at the Colorado University in Boulder, became interested in the genus *Solenophora* (which now contains the submerged genera *Arctocalyx* and *Hippodamia*) in the mid 1950s. After several years of literature review, examination of specimens borrowed from European herbaria, and contact with professionals such as Dr. Harold Moore (gesneriad specialist at Cornell) and Conrad Morton (at the Smithsonian), Dale reached two decisions: first, one of us would have to get a doctoral degree (I was elected); and second, field observations were needed before we could proceed. So, I went back to school and we secured a permit to import plants and started making plans for a month long trip to the states of Oaxaca and Chiapas in Mexico.

From our first collecting trip in October of 1962 through our latest reconnaissance trip in April of this year, it has been a challenging but interesting and rewarding family experience locating, observing, photographing, and collecting gesneriads in Mexico and Central America. Although gesneriads were found on every trip, *Solenophora*, which was the focus of these trips, was found on only the first. Few species in this genus are in cultivation, and several are represented by a few and sometimes only a single collection. There are still many unanswered questions and perhaps new species to be found, and it is my hope that renewed interest in *Solenophora* will be sparked by the articles in this issue of GESNERIADS.

The 1962 Trip

Leaving my 15-month old son, Donald, with his aunt and taking our other three children Dale, Jr., Doshia, and David (ages 14, 12, and 10 respectively) out of school for such a long time was a tough decision; but Donald was too young, and we believed that what the other children would learn on the trip would be worth more than what they would miss in school.

When Dr. Moore learned Dale was going to Mexico in 1962, he sent him directions to look for some plants he had collected in Oaxaca and Chiapas the previous year and had lost. These plants were *Achimenes cetoana*, a white-flowered form of *Smithiantha multiflora*, and what became *Moussonia hirsutissima*.

Dale had previously made contact with Thomas MacDougall, a naturalist and collector of various kinds of plants and small animals in the state of Oaxaca. Don Tomás, as he was called by the local peoples, had explored a newly cut logging road (which today is the paved Highway Mex 175) and had determined that there were several gesneriads growing along it. He made arrangements with Dale to meet and take us to that area in October 1962.

Before meeting with McDougall, we made an attempt to look for *Solenophora coccinea* near Villa Alta, approaching it from the city of Oaxaca. Unfortunately, the road from the "highway" (shown on the Mexican highway maps) at Ixtlán de Juárez to Villa Alta where *S. coccinea* had been collected, was an oxcart trail and impassable for our Chevrolet Carryall, so we were forced to turn around.

We drove from Oaxaca to Tehuantepec near the Pacific coast to meet Don Tomás. As our driving time from Colorado was not easily scheduled, we arrived when he had several other commitments and could not leave for a few days. After a night in a Tehuantepec hotel, we decided to travel into the state of Chiapas to look for gesneriads. Among those we found were *Achimenes cettoana* (growing just outside of Ocozacoautla in a clay bank in a stream), *Achimenes longiflora*, *Kohleria schiedeana* (now included in *K. spicata*), and a red-flowered species of *Achimenes*.

Returning to Tehuantepec, we picked up Don Tomás and drove across the Isthmus of Tehuantepec. At Acayucan we turned north toward San Andres Tuxtla. During the drive, Don Tomás talked about his studies of the native languages and the meanings of some of the words. We saw a sunlit volcano, Volcán San Martín Tuxtla, (*tuxtla* means rabbit) and he told us of a species of *Solenophora* near El Triunfo (on the side of the volcano) which had flowers and buds over a long period of time. He called it *Solenophora* "Popoluta" and later collected and sent seeds to Dale, who distributed them to Dr. Moore at Cornell. It is interesting to note that Dr. Margaret Stone (longtime chair of the AGGS Research Fund) took a herbarium specimen from the plants grown in the Cornell University Conservatory at Ithaca, and that specimen (as *Solenophora tuxtlensis*) is the one illustrated in the article by Maximilian Weigend and Harald Förther. [2002. A revision of the Central American genus *Solenophora* (Gesneriaceae). Harvard Pap. Bot. 7(1): 37-78].

From yet another "Hotel Pemex" (our term for sleeping in our car in a gas station parking lot), we traveled to Paso Nacional and took the first of two ferries across the Rio Papaloapan. We then continued south on the other end of the road we had traveled north on from Oaxaca – past Ciudad Aleman and the ferry at Tuxtepec, then on and into the mountains – stopping for the night beside a thatch-roofed "bus stop" at about 5500 ft elevation where it was much cooler. Don Tomás spent the night in the bus stop while we slept in the car. Bats (probably including vampires) were evident during the night and we were happy we had shelter.

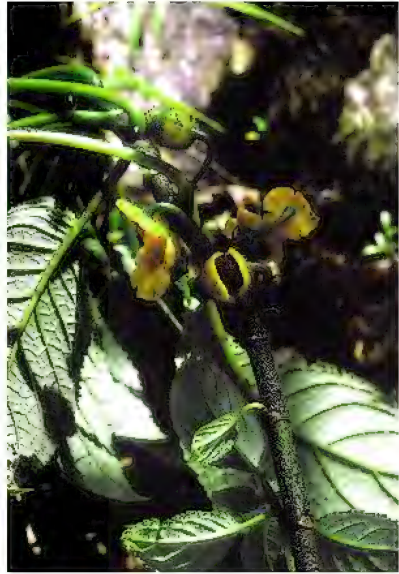
In the morning we continued along the road for about seven miles and turned around at kilometer 109 when Don Tomás spotted one of the varieties of *Solenophora* we expected to find. In the next five miles, we made eight collections of *Solenophora*: seven of what Dale thought at the time was *S. insignis* (but is probably *S. obscura* as the seed pods are yellow and not green as described by Weigend and Förther); and one of *S. coccinea* with its unmistakable long calyx lobes (the plant we had hoped to look for at Villa Alta, approximately 20-30 miles away as the crow flies).

The fruit of *Solenophora* has seldom been described, and only from dry specimens, as a capsule. It is a somewhat fleshy fruit from an inferior ovary with a fairly thick wall. Other such fruits are cucumber (a pepo) and apple (a pome). The one ripe fruit we saw, I described as breaking open, not dehiscing along a predetermined line such as a capsule, but more or less around the fruit, and called "anomalous dehiscence" by botanists. See the photo on page 24.

We started back toward Tuxtepec (then and now the only town of any significant size in the area), stopping whenever we saw a gesneriad. As we started to descend, we collected *Columnnea schiedeana* with much red on the back of the leaves, several "Kohlerias" which are now *Moussonia*: *M. deppeana* (two varieties) and *M. papillosa*, and at a much lower elevation an unnamed, new species which is now *M. hirsutissima*. Also collected along



Solenophora coccinea fruits with their long, narrow calyx lobes (photo by Dale Denham, Mexico, 1962)



The split-open fleshy fruit of *Solenophora calycosa* (photo by Dale Denham, Mexico, 1962)



Solenophora insignis photographed by Jeanne Katzenstein on the Gesneriad Research Foundation study trip to Mexico in 1991

the roadside were *Achimenes grandiflora* and the white-flowered *Smithiantha multiflora* (the previous *S. multiflora* in cultivation was cream colored). We left Don Tomás in Tuxtepec, proceeded to Ciudad Aleman for the night, and then started on our way home.

Other Trips:

In 1971 and 1975 we again drove through Mexico on our way to Central America. We hoped to find *Solenophora*, first in Guatemala at Cobán and Sierra de las Minas (which is on the north side of the highway from Guatemala City to the Atlantic), and second in the Chiriqui Province in Panama ... but we were unsuccessful.

Others collecting in the Tuxtepec area have found *Solenophora insignis* and *S. obscura*, but not the *Solenophora coccinea* found on our 1962 trip. In October of 2001, celebrating the fact that for the only time in our lives I was twice as old as my son Donald, I was able to attend the Botanical Conference Sociedad Botánica de México in Queretaro, and later retrace the Tuxtepec part of our 1962 trip. Tuxtepec (where we spent the night before going into the collecting area) wasn't, and still isn't, a tourist town. We needed to cash traveler's check to buy gas for the trip, but they acted as if they had never seen them before, and we lost more than two hours before we found a place that would cash them. Because of this, we were unable to go as far or spend as much time looking as we had planned.

I had heard that the area had been heavily logged and was afraid that I might see a barren landscape, but I was pleasantly surprised. Although it had been 39 years since I had seen it last, the major difference seemed to be that most of the large trees were gone, replaced by many younger trees of varying heights. The impression I had was that the area had been logged only in patches because of the extreme steepness and because the road in the area we collected was essentially a shelf road. We also did not see large tree ferns that we had seen then.

The clouds came in as they do in the afternoon, limiting visibility, so we had to turn around before reaching the area where we had found the *Solenophoras* before. We took pictures of *Kohleria spicata* and the three varieties of *Moussonia*. Even though we didn't find *Columnnea schiedeana*, *Smithiantha multiflora*, or any species of *Solenophora* (small farms appeared to cover the area of lower elevation), there was much undisturbed area in the surroundings, so it is likely that they all persist in the larger area.

My Latest Trip:

This year when my son Dale, Jr. (who is now living in Mexico and teaching English) and his wife Silvia asked if I wanted to come down for Easter week (which he had off), I said, yes ... if I could spend a day looking for *Solenophora*. We also arranged a short stay at the Los Tuxtlas research station near Catemaco, Veracruz. The new director, Rosemary Coates, and biologist Alvaro Campos welcomed us to the facility which is run by the Universidad Nacional Autonoma de Mexico and is a must stop for anyone interested in tropical ecology.

Biologist Campos, whom we had met briefly on our 2001 trip, was most helpful in locating gesneriads for us to photograph. Although he revisited several recorded localities, he was unable to find *Solenophora tuxtensis*, but I was able to examine one herbarium specimen of it. He also brought us an unidentified species of *Columnnea* which closely resembled one I have called "Goldfish Plant" that I had purchased at a local nursery.



Dale, Jr., by a steep hillside lush with vegetation along a Mexican road in 2001

From Los Tuxtlas we drove to Tuxtepec. The next day we got a reasonably early (for Mexico) start south on Highway Mex 175 towards Oaxaca again searching for the *Solenophoras* we had found in 1962.

From Tuxtepec to Valle Nacional, the highway rises only slightly, up to 70 meters at Valle Nacional. Then the road starts to rise more rapidly, to 115 m, 3.1 miles away at the town of Yetla, etc. We drove to Kilometer 105 (8170 feet) before turning around to look for plants.

For the benefit of future travelers, I would like to give the sequence of place names we encountered – several of which are mentioned in the article by Weigend and Förther as collection sites for *Solenophora insignis* or *S. obscura* – and most of which are not on maps: Valle Nacional, San Mateo Yetla, Plan de Flores, Puerto Eligio (Km 63), Metates, Vista Hermosa (1361 m) [one collection is cited as Villa Hermosa, but I am reasonably sure that it is Vista Hermosa], La Esperanza (1650 m), Yolox, and San Isidrio (road to it is at 2050 m). Most of these are small towns below the highway. (*I can be contacted at my email address to provide more information on locations in this area, many of which aren't on the maps.*)

Because it is a shelf road, there are few places to pull over and investigate the vegetation. In 1962 when it was a rough dirt road, it was possible to stop in almost any straight stretch; but now that it is paved, that is no longer possible. After getting in and out of the car a few times, we would leave Dale, Jr. at favorable-looking locations and drive on to a safe spot to wait while he walked along the road looking for gesneriads. In this way we looked along the highway to about Km 82, a distance of about 12 miles, but we found no *Solenophoras*. The highway had been paved, and where there were flat edges to the roadside, the vegetation was cut short. In a number of places at the margins of the roadsides, we saw red and orange *Moussonias*, probably *M. deppeana* and *M. papillosa*; and lower down we saw the yellow-flowered *M. hirsutissima*.

At a much lower elevation (6360 feet), Dale, Jr. found a branch of a beautiful *Columnnea schiedeana* with many large flower buds, similar to the one we found in 1962. It appeared to have been cut off the tree it had been growing on by road workers who keep the edges of the highway clear (something that was done rarely when it was a dirt road).

Although limited by his job and our raising four children, Dale and I dedicated much of our free time to studying *Solenophora* and other gesneriads. Together we gathered much significant information, but there were many areas where field work was needed, and Dale refused to publish anything he was unsure of. We had planned to do the field work once Dale retired, but a debilitating, fatal disease had other plans, and most of this field work still needs to be done. Based on what I saw during my last trip, I feel that *Solenophora* species are still present in the area, but a search with more time and the proper equipment to search away from the main road may be required to find them.



Herbarium specimens of *Solenophora erubescens* (left) and *S. obscura* (right) collected in Guatemala by Hans Wiehler in 1975 (images courtesy of the Marie Selby Botanical Gardens)

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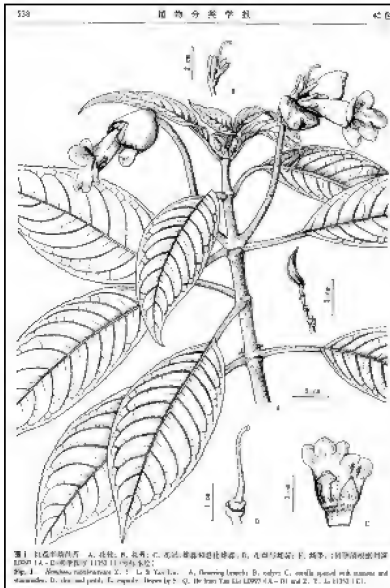
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Fang Ding & Qin De-Hai. 2004. *Wentsaiboea* D. Fang & D.H. Qin, a new genus of the Gesneriaceae from Guangxi, China. *Acta Phytotaxonomica Sinica* 42: 533-536. Abstract: "*Wentsaiboea renifolia* D. Fang & D.H. Qin, a new genus and species of Gesneriaceae from Guangxi, China, is described and illustrated. This genus is similar to *Dolicholoma* D. Fang & W.T. Wang in the shape of stigma, but differs by having leaves reniform, palmately nerved and base cordate, corolla obliquely campanulate, corolla lobes rounded, and both stamens and staminodes adnate to corolla tube near base. It is also similar to *Chiritopsis* W.T. Wang in the habit, but differs by having leaves palmately nerved, corolla tube campanulate and abaxially swollen, and stigma hippocrepiform." The genus name honors Chinese gesneriad specialist Wang Wentsai.

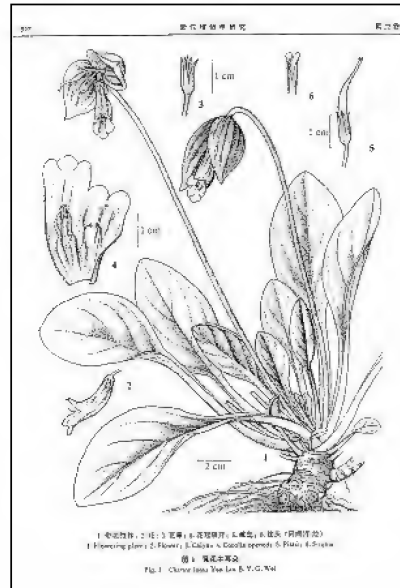
Hilliard, O.M. & B.L. Burtt. 2004. Bornean species of *Cyrtandra* (Gesneriaceae) closely allied to *C. chrysea* and *C. eximia*. *Kew Bulletin* 59: 251-259. Abstract: "*Cyrtandra chrysea* C.B. Clarke and *C. eximia* C.B. Clarke, together with seven new species, constitute a group distinguished by a suite of characters including the deeply divided calyx, the small white corolla variously patterned with pale to deep purple, the unilateral disc, the ovary constricted at base and the small fruit. All nine species are fully described and an identification key provided. Six species (*C. decipiens*, *C. lanata*, *C. dasymallos*, *C. nibongensis*, *C. villifructus*, *C. kostermansii*) are described as new; the material of a further species is insufficient to typify a name."

Li Zhen-Yu & Liu Yan. 2004. *Hemiboea rubribracteata* Z.Y. Li & Yan Liu, a new species of *Hemiboea* (Gesneriaceae) from Guangxi, China. *Acta Phytotaxonomica Sinica* 42: 537-540. Abstract: "A new species of Gesneriaceae, *Hemiboea rubribracteata* Z.Y. Li & Yan Liu, is described from Guangxi, China. The new species is similar to *H. cavaleriei* Lévl. in its leaf form, but differs by its robust and rigid stem, red involucre, longer calyx lobes, corolla white and glabrous outside, lower lip of corolla 3-lobed to middle."

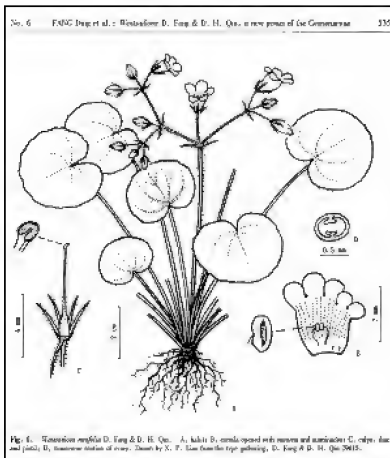
Liu, Y. & Y.G. Wei. 2004. *Chirita lutea* Yan Liu & Y.G. Wei, a new species of Gesneriaceae from Guangxi, China. *Journal of Wuhan Botanical Research* 22: 391-393. Abstract: "A new species of Gesneriaceae, *Chirita lutea* Yan Liu & Y.G. Wei, is described and illustrated from Guangxi, China. The new species is similar to *Chirita eburnea* Hance in its habit and leaf form, but differs by its nutant [nodding] cyme, flavous [yellow] corolla, and anthers and staminodes white lanate at apex." [Note: The yellow-flowered plant that has been in cultivation for many years under the name *Chirita eburnea* is apparently a separate species and is described in this paper as *Chirita lutea*.]



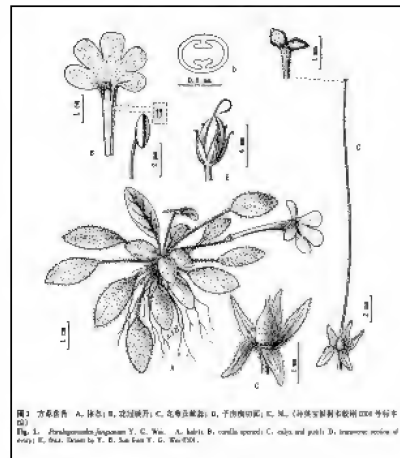
Hemiboea rubribracteata
Z.Y. Li & Yan Liu



Chirita lutea
Yan Liu & Y.G. Wei



Wentsaiboea renifolia
D. Fang & D.H. Qin



Paralagarosolen fangianum
Y.G. Wei

Weï Yi-Gang. 2004. *Paralagarosolen* Y.G. Wei, a new genus of the Gesneriaceae from Guangxi, China. *Acta Phytotaxonomica Sinica* 42: 528-532. Abstract: "*Paralagarosolen fangianum* Y.G. Wei, a new genus and species of Gesneriaceae from Guangxi, China, is described and illustrated. *Paralagarosolen* Y.G. Wei is closely related to *Lagarosolen* W.T. Wang in having corolla tube cylindric, not swollen, and stigmas 2, but differs by having leaves sometimes peltate at base, cyme with only one flower, corolla lobes rounded-obtuse at apex, and capsule broadly ovoid-ellipsoid."

Xu Liang & Wei Yi-Gang. 2004. *Paraboea guilinensis* L. Xu & Y.G. Wei, a new species of Gesneriaceae from Guangxi, China. *Acta Phytotaxonomica Sinica* 42: 380-382. Abstract: "A new species of Gesneriaceae, *Paraboea guilinensis* L. Xu & Y.G. Wei, is described from Guanxi, China. The new species is similar to *P. crassifolia* (Hamsl.) Burtt in its habit and leaf form, but differs by its leathery leaves, glabrous peduncles, pedicels and calyx, distinctly bilabiate corollas, and capsules not spirally twisted."

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Marlene Bylund <marlenebylund@hotmail.com>
Umeå, Sweden

My name is Marlene. I am a student at Umeå University, and this Christmas I will hopefully be able to entitle myself a registered dietician. Umeå is a small city with about 110,000 inhabitants situated in the North of Sweden. The winter season is from November to April, spring in May, summer from June to August, and fall in September and October. Because of the city's location near the polar circle, the winter is characterized by short days and freezing temperatures (from minus 1°C to minus 30°C) while the summers are characterized by midnight sun and pleasant temperatures (between plus 15°C and 30°C).

I get most of my gesneriads from our local gesneriad group, the Gesneriasts of Sweden. I often get plant material directly from our society's founder Ingrid Lindskog when I visit her, but I just as often trade cuttings with gesneriad friends from all over the country. I have also gotten plant material (cuttings, tubers, rhizomes) from two very nice and generous people in the US and from a friendly grower in Europe. Some of my plants are the result of growing seed from the AGGS welcome packet. They seem to all be *Sinningias* ... but time will tell which ones they are. Other than that, I have only ordered seed from the Gesneriasts of Sweden's seed fund. I haven't dared do any hybridizing of my own yet, but I know people here who do hybridize – it seems like a lot of fun.

Sinningias, *Kohlerias*, *Achimenes*, *Smithianthas* and *Nematanthus* are my favorite gesneriads as they seem to like my growing conditions, but I also have some *Chiritas*, *Drymonias*, *Columnneas*, etc. I grow all my plants on windowsills and on tables alongside windows in my apartment. My windowsills are very sunny and warm in the summer so I usually give the plants some shade with thin curtains during the days when the sun is the most intense. I grow some of my *Sinningias* on the balcony in the summer, but the rest of my plants seem to be happier indoors. The winter is always problematic as the plants suffer from the darkness and dry air. I don't have extra artificial lights, but in the ceilings and windows in all rooms I do have energy-saving lamps which seem to give enough light to help the plants through the darkest months in November and December. Still there are plants like *Aeschynanthus* and *Columnneas* that surprise me with flowers during the darkest days of the year. In January the days start to grow longer again, and in February the plants start new growth. February to June is also the best time to start new plants from cuttings and seeds if you don't have artificial lighting. If planted later on, they tend not to get developed enough to survive the winter.

Streptocarpus and *Saintpaulias* are, in my opinion, the most common gesneriads in Sweden, probably because they are readily available in the flower shops. But rhizomatous and tuberous gesneriads are also popular, especially with our chapter members. It is very practical for us to have plants that go dormant during the winter when the daylight is not enough for plants or people.

The Gesneriasts of Sweden has an annual meeting that usually includes a Flower Show. The society has almost 500 members mostly from Sweden, but also members from abroad. We also sell gesneriads at gardening fairs, etc., all around the country in order to spread knowledge about gesneriads and to spread the word about our society. Every spring I usually help at our local gardening fair, Trädgård Norr. Other than that we try to have local gatherings a couple of times a year where we share plant material and growing tips about gesneriads. The most exciting part, of course, is to see how the host for the evening is growing her/his gesneriads and which ones he/she is growing. There is also an African Violet Society in Sweden that usually does about the same things as the Gesneriasts do.

Since I joined the Gesneriasts of Sweden, and later on The Gesneriad Society, I have gotten to know a lot of plants as well as fantastic people who have all been nothing but nice to me. It's great that societies like this exist so that we can share our interest and knowledge with each other. I hope everyone can find as much joy in their hobbies as I have found with gesneriads.

Good growing!

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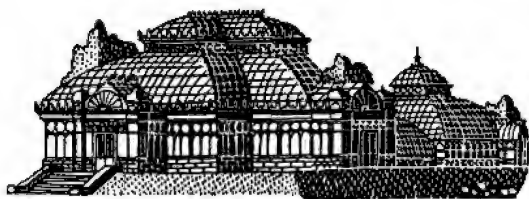
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Plants grown by Marlene Bylund
in her east-facing office window



Achimenes dulcis grown and
photographed by Marlene Bylund



Gesneriad enthusiasts in Sweden enjoy growing alpine plants like the
Haberleas seen here in Ingrid Lindskog's partly shaded garden border

Gesneriads in Australia

Ruth Coulson <mrcoulson@iprimus.com.au>
New South Wales, Australia

Growing plants of all sorts is my passion, and for more than thirty years gesneriads have been part of that – an interest that has fit in well with full-time family duties and periodic casual work.

Here in coastal New South Wales, not far from the ocean, I have an ideal climate for many gesneriads. Before moving 150 kilometres north, we lived in western Sydney. Living a little further inland posed a few problems for tropical plants on slightly frosty mornings in winter, but not here. Temperatures are rarely below 10°C on winter nights, with normally mild days. Whilst summer days can be hot, perhaps to 35°C, damage to plants is mostly ameliorated by high humidity. Because of this, I concentrate on plants from tropical or semi-tropical habitats.

The dry heat of spring and the warm, humid summer nights pose problems for cool-climate plants. I now avoid growing plants that are going to be temperamental for me. Why trouble when other genera thrive?

Although I try to grow a wide variety of different gesneriads, my favourites are Sinningias and Achimenes. Both are generous in flower and oblige me with a dormant season when I can relax and not give them quite so much attention.

When I began growing gesneriads, my plants came from friends or from general nurseries. *Sinningia speciosa* hybrids, Columneas, Aeschynanthus, Nematanthus, and a few Streptocarpus were commercially available. Only after I became interested in African violets in the late 1970s did I begin to collect gesneriads seriously.

Large nurseries have always imported plants that will sell well, including gesneriads. Over the years, some small specialist nurseries and hobbyists also imported them. However, our strict rules regarding importing of plant material, and the associated high costs, are changing that. An import license is required, and the plants must be inspected and treated on arrival. Plants are kept in quarantine for three months before being released to the owner. Charges for license, inspection, treatment, and time in quarantine are high. Plants may die as a result of fumigation or dipping. Given the high cost, possible losses and effort, importing is now more or less out of reach of hobby growers. We are more concerned about conserving the gesneriads that we already have. Where in the past we wanted plants grown overseas, we now have more growers hybridising to produce local plants.

For me, the sources of my gesneriads have mainly been from my association with other people of similar interests. There are no actual gesneriad societies in Australia, but we have African violet societies, some of which have special interest groups dedicated to the other gesneriad plants. I belong to four of the five groups in this state: The African Violet Association of Australia and the African Violet – Gesneriad Society of N.S.W. in Sydney, the Central Coast African Violet Club (which is closest to me), and the Hunter Valley African Violet Society in Newcastle. Sharing plants, cuttings and seed forms a large part of our activities.

I grow gesneriads in different areas — wherever one more plant can be fitted. Outdoors the main area is a shade house. To some extent this is for protection from hot sun, but even more for protection from insects and birds. Space is never enough for needs, so many trailing gesneriads happily live hanging on the fence in part shade of large trees. More potted gesneriad plants grow in my courtyard. Some grow happily and flower in the garden, including the larger growing *Sinningias* like *S. warmingii* and *S. tubiflora*, as well as *Paliavanas*, *Achimenes*, *Chrysothemis*, and others. Of course the results are far from perfect as weather conditions and pests take their toll, but they do provide colour and interest.

My outdoor collection of gesneriads consists of only those plants that will grow there all the year, growing and flowering in their natural seasons. Outside plants are watered less frequently in winter, but otherwise care is similar. I propagate indoors in winter.

I also have a large room devoted to growing plants. It houses a large collection of African violets and numerous other gesneriads. Anything small, delicate, valuable or unusual I grow indoors — miniature *Sinningias*, *Episcias*, *Chiritas*, *Petrocosmeas*, *Diastemas*, *Phinaeas* and *Gesnerias*. I try to reduce the number of plants inside in summer since too many lights make too much heat.

Those indoors are grown in a coarse African violet mix and fertilised with liquid African violet fertiliser using a wick system. Those grown outside need a heavier mix so I use a high quality commercial potting mix with added perlite, sphagnum peat moss, and fertiliser. In a warm climate it is easy to under-fertilise outdoor plants, so I add to the mix in the beginning and apply granular slow-release fertiliser during the summer. I use another powdered fertiliser to produce plenty of flowers. For simplicity, outdoor watering is done with plain water.

All the African violet groups have shows annually. African violets predominate but plenty of other gesneriads appear; in fact, "Best Gesneriad" is one of the major awards. It is also possible to exhibit at general flower shows held by Garden Clubs.

The most renowned show is the Sydney Royal Easter Show, the largest annual event in the country. It includes the Sydney Royal Flower and Garden Show. The sheer size of the show (it attracts around one million visitors during its 14-day period) ensures high exposure of exhibits. There are specific classes on four different days for gesneriad plants, attracting entries from Sydney growers.

A long-time exhibitor at "The Royal" is Charles Lawn (this being his 50th year). He is an accomplished hybridiser of *Sinningia speciosa*, amongst other gesneriads, and has perfected the timing to have exquisite blooms every Easter. He also exhibits many other gesneriad genera as well as ferns, begonias, bromeliads and miscellaneous plants. His success is legendary. He has received the prestigious Banksian Medal (presented by the Royal Horticultural Society, England) on ten occasions, the John Thomas Baptist Medal (from the Royal Horticultural Society of NSW) ten times, and 500 Championship Ribbons. We are lucky to have a truly consummate grower and hybridiser like Charles.

As well as Charles, we have hybridisers working on a variety of other genera. My own hybridising began in the early 1990s with miniature *Sinningias*. I soon found that growing large numbers of them was too work

intensive, and I didn't take up hybridising again until 1999 when I began concentrating on the mid-size to larger Sinningias. I fell in love with the almost constant flowering of *Sinningia iarae* and the way the flowers are held high above the leaves for maximum display. My aim was to produce plants that grew no more than 300 to 400 mm tall, yet had this habit of growth and flowering with a wide range of colours. I have become interested in peloric and calyx-double flowers, but the basic aim remains. Progress is slow because it is necessary to grow a promising plant for two to three seasons to assess its performance.

Gesneriad growing is alive and well in Australia, but our greatest challenge is to make more of them known to the general community.



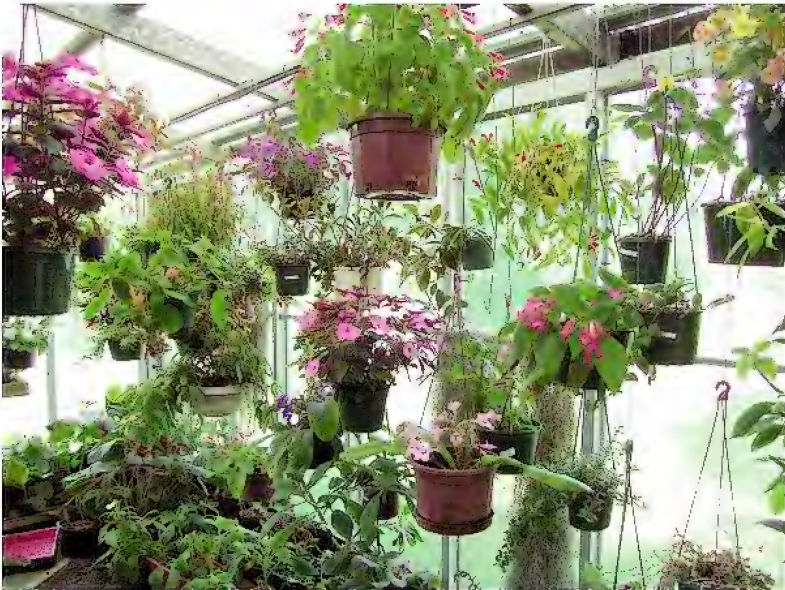
Sinningias are at their best in October in Ruth Coulson's greenhouse



Gesneriads growing in Charles Lawn's glasshouse



Gesneriads growing in February in Ruth Coulson's greenhouse



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Playing with *Streptocarpus* in South Africa

Jaco Truter <jtruter@dunlopindustrial.co.za>
Benoni, South Africa

I am spoiled ... and I mean really spoiled. I live in the country where the majority of species of *Streptocarpus* are found wild. Only about 40 km away from the city of Benoni in Gauteng Province where I live, there is a nature reserve called Sugar Bush Ridge. *Streptocarpus vandeleurii* can be found growing there at the base of large boulders in the shade of bushes and small trees. It flowers for at least four months from spring into early summer.

I have traveled many miles on field trips trying to locate as many species of *Streptocarpus* as I could. The most memorable have been trips to Kwazulu-Natal and Mpumalanga to find species only known from single localities. I remember the trip to Mariepskop Mountain to find the locality for *S. meyeri*. Apart from the localities for this species in the Eastern Cape, Mpumalanga Province (on the border with Swaziland), had the only other known populations for that species. Walking on the grass-bedecked flat summit was a real thrill, seeing the magnificent panorama of the low-veld from the "roof of the world", walking past a big group of boulders and then finding this gem hidden between rocks. It has soft, hairy, rosulate leaves and a long, lax peduncle with numerous blue-lilac flowers with pure white corollas.

The thrill of the chase is as heady as any big game hunt: doing your homework, finding out what the localities are, getting hold of topo-cadastral maps to pinpoint positions, packing bags for long weekends, tick-spray, and all the paraphernalia needed for long hikes (water bottles, packed lunches, compass, notebook, pen, brown paper bags, hiking bags, etc).

Streptocarpus is such a unique genus – so many species known only from the original type localities, so much variation, so many colour forms, so many growth forms, so much colour – that each new region brings untold surprises. Who said that Streps only grow in cool montane forests ... some of the most beautiful species come from hot, dry river valleys, and every conceivable habitat in-between. Look at the newly described *S. lilliputana* from the species-rich Pondoland Centre of endemism (Transkei, now called the Eastern Cape). This species grows in moss-pads in seepage zones, which means that the plants have water trickling around their roots during the rainy season. There are not many species that enjoy that type of habitat, *S. fan-ninia* being the only other Southern African species to love that type of habitat. There are a number of potentially new species in my country, so imagine how many others have not been found in other African countries, and even Madagascar. I believe a new species of *Streptocarpus* was recently described from Angola ... amazing!

From the heights of Mariepskop, where a new subspecies of *S. parviflorus* awaits formal description (in contrast to the typical subspecies from the Woodbush area of Limpopo Province, this gem is a tiny rosulate with masses of diminutive white flowers, growing exposed as lithophytes), through to the white rosulate discovered on Three Sisters Mountain (which grows exposed on Dolerite boulders), to the red/pink rosulate from the border area of Mpumalanga with Swaziland, the unifoliate with white/blue

flowers and the scent of *Magnolia soulangeana* from Swaziland, to white unifoliate from the Inanda and Klein Noodsberg area of Kwazulu-Natal, perrenating blue plurifoliate known only from two farms near Pietermaritzburg (Kwazulu-Natal), the scope for new discoveries is still pretty much limitless.

What to do with all these newly collected beauties???

I had become enamoured with the genus around 1995, but there were no gesneriad clubs that I was aware of at that time. I had heard of an African violet club, but was not really interested in *Saintpaulia* as such. I read a gardening magazine article about Martin Kunhardt, promptly phoned him, and visited soon after. I was smitten. Where to find these lovelies? Fortunately, I was an ardent collector and grower of indigenous terrestrial and epiphytic orchids and promptly went out into the field, mostly retracing my steps, because many orchids grew in association with Streps in many localities. I bought a pile of fascinating new Kunhardt hybrids and began collecting as many species as I could lay my hands on. Those that I could not find, or were too far away, I would ask someone from my "army" of contacts to source the chosen species. Soon I had such rarities as *S. montigena* (from the Katberg Pass), *S. caeruleus* and *S. longiflorus* (from the Blouberg), *S. davyi* (from Mbabane, Swaziland), and *S. makabengensis* (from the Makabengberg).

Where I live, Benoni has a pretty balmy climate where summers are rainy and warm (temps around 23-28°C) and winters are sunny and cold (temps around 2°C going up to 15°C during the days). I have been growing my Streps in a very large 15 m × 8 m tunnel, with an extraction fan to cool the plants down during summer and an LPG gas heater to help over winter. So far so good ... there are casualties from over-watering, and mite losses, but on the whole I have a healthy collection.

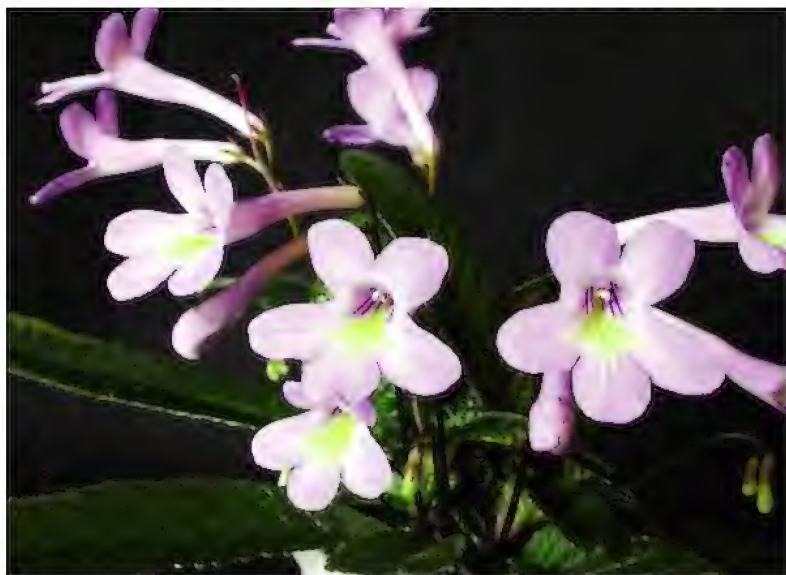
One thing I have found is that, as with all plant collections, one has to have a disciplined approach, i.e., "do what you have to, when you have to, and don't postpone" as it may be to the detriment of your plants. Fertilize, fungicide, miticide, water, transplant community pots when you have to, etc.

Then the hybridising bug bit me ... big time! Initially, I made just primary crosses such as *S. rexii* × *S. johannis*. In hind sight, most of those were not really worth the effort, but some have stood the test of time. For me some of the most beautiful primaries are: *S. floribundus* × *S. dunnii*; *S. parviflorus* × *S. candidus*; *S. montigena* × *S. fasciatus*; *S. formosus* × *S. vandeleurii*; and the like!!

By that time, I had acquired hybrids from other sources, mostly in the USA, UK, and some from Germany and elsewhere in Europe, mostly in the form of leaves (which incidentally is the best way to acquire new material from overseas sources), but also new plants. Soon my hybridising was becoming more complicated, with complex hybrids backcrossed onto species. Most were "works in progress", but I am now developing some really stunning new lines. The biggest interest here to me is the potential of *S. lilliputana*. My first generation hybrids are starting to flower now, and I have second generation crosses in compot already. These are absolutely beautiful, miniature plants with very big flowers in a range of colours. There are certain key species I am using now that on the whole (based on my own experience) give excellent hybrids where colour, shape, number of flowers, floriferousness, etc., are concerned. Some of these are *S. candidus*, *S. formosus*,



Streptocarpus 'Jaco's Gem' (a hybrid grown from Jaco's seed donated to the British Streptocarpus Society seed fund) exhibited by Bill Price at the 2006 Convention (photo by Dale Martens)



Due to Jaco's donation of *Streptocarpus lilliputana* seeds, Lee Stradley was able to cross it with *S.* 'Little Gem' to create this compact hybrid *S.* 'Fernwood's Minuet' (grown and photographed by Dale Martens)

S. johannis, *S. fasciatus*, *S. lilliputana*, etc. The search for better reds, better spots/bars/mottling, micro-miniature forms, good unifoliate forms (an avenue not many people are following), new shapes with the introduction of rarer species, the introduction of unusual unifoliate to rosulate hybridising to capture the vigour and longevity of the rosulate, and the myriad colours, superior peduncle lengths and flower counts, etc., etc., make hybridising such an exciting experience!!

Quite by accident, I made a number of purely speculative crosses only using monocarpic species as parents. What a surprise: a whole new world of colours, shapes, and sizes. To date my most exciting one has been *S. grandis* × *S. saundersii* producing long, upright peduncles with masses of long-lasting big mauve flowers. *S. molweniensis* × *S. eylesii* and *S. porphyrostachys* × *S. grandis* have also produced some stunners.

Adding unifoliate genes to rosulates has also been very exciting. (*S. cyaneus* × *S. vandeleurii*) × *S. caeruleus* absolutely blew me away when it started flowering last season with very long, erect peduncles covered with large *vandeleurii*-shaped flowers (the tubes a clear dark blue, the corolla lobes pure white), with the magnificent scent of *S. vandeleurii*. Needless to say, I have made a number of hybrids with that clone.

I have found that not all unifoliate × rosulate hybrids are happy unions. Many lack the hybrid vigour that one would expect and really have to be pampered to survive. Is that pampering really worth it? With a better choice of rosulate, it is possible to obtain really strong hybrids with lots of hybrid vigour. So play around with various species or hybrids to use as the female parent. I have found that the following make excellent female parents: *S. floribundus*, *S. formosus*, *S. fasciatus*, and obviously most of their hybrids, too. Many of my *S. vandeleurii* hybrids have been very weak, but crossed onto the right rosulate, have produced some excellent clones. One in particular is still my favourite – *S. formosus* × *S. vandeleurii*. The hybrid is strong, has stiff, erect peduncles, and is multi-flowered, looking for all the world like a multi-flowered *formosus* (slightly smaller flowers, same colour, perhaps a little more pastel, same markings, and, of course, that lovely scent).

Did you know that there is another species of *Streptocarpus* that also has a quite outstanding scent, and that is *S. fanniniae*. My one clone from Lilani Hot Springs, KwaZulu-Natal, has the scent of petunias. *S. eylesii*, *S. candidus*, *S. vandeleurii*, and the new unifoliate species from Swaziland, are examples of something rare in this genus: scent.

Since I started, there has been a slow but steady growth in gesneriad interest in South Africa. There is now a new fledgling club in Pretoria with a number of members. The interest is in gesneriads in general, but obviously with the main interest being *Streptocarpus*.

I have been fortunate to receive seed from the GHA, and have contributed to their seed fund, too. It's important to always give back – if your hand is open in giving ... it's sure to be open to receive!

Here's looking forward to many more hybrids of outstanding vigour and quality, and to many new species that will serve to expand the boundaries of those hybrids!!!

Gesneriad Register

Judy Becker, Registrar <jbecker@mohawk.net>
Salisbury, Connecticut, USA

The following registrations should be added to the Registered Gesneriads List found in Appendix C of the 1990 Gesneriad Register.

06927	<i>Streptocarpus</i>	'Jaco's Gem'	<i>S. wild</i> collected seed	Brian Grieve
06928	<i>Streptocarpus</i>	'Lilac Lady'	<i>S. 'Franken Dainty Lady'</i> × self	Brian Grieve
06929	<i>Streptocarpus</i>	'Royal Montreal'	<i>S. "Royal Mix"</i> × <i>"Royal Mix"</i>	Elisabeth Parent
06930	<i>Episcia</i>	'Blue Mist'	<i>E. 'Silver Skies'</i> × <i>E. 'Faded Jade'</i>	Betty Cessna
06931	<i>Eucodonia</i>	'Pat's Pet Parrot'	<i>E. 'Adele'</i> × <i>E. 'Celeste'</i>	Gary Dunlap
06932	<i>Eucodonia</i>	'Pat's Pet Penguin'	<i>E. 'Adele'</i> × <i>E. 'Celeste'</i>	Gary Dunlap
06933	<i>Eucodonia</i>	'Pat's Pet Toucan'	<i>E. 'Adele'</i> × <i>E. 'Celeste'</i>	Gary Dunlap
06934	× <i>Smithicodonia</i>	'Pat's Pet Mockingbird'	<i>E. 'Adele'</i> × <i>S. multiflora</i>	Gary Dunlap
06935	× <i>Smithicodonia</i>	'Pat's Pet Swan'	<i>E. 'Adele'</i> × <i>S. multiflora</i>	Gary Dunlap
06936	<i>Smithiantha</i>	'Pat's Pet Antelope'	<i>S. multiflora</i> hybrid × self	Gary Dunlap
06937	<i>Smithiantha</i>	'Pat's Pet Armadillo'	<i>S. cinnabarina</i> × <i>S. canarina</i>	Gary Dunlap
06938	<i>Smithiantha</i>	'Pat's Pet Chinchilla'	<i>S. 'Red King'</i> × <i>S. 'Tropical Sunset'</i>	Gary Dunlap
06939	<i>Smithiantha</i>	'Pat's Pet Chipmunk'	<i>S. 'Golden Leopard'</i> × <i>S. canarina</i>	Gary Dunlap
06940	<i>Smithiantha</i>	'Pat's Pet Cougar'	<i>S. cinnabarina</i> × <i>S. canarina</i>	Gary Dunlap

***Streptocarpus* 'Jaco's Gem'**, 2006, IR06927, Brian Grieve, UK. (*S. wild* collected seed). Seed planted Nov. 14, 2000, first flowered June 2001. Sterile and reproducible only vegetatively. Rosette. Leaves mid to light green, up to 17 cm long × 9 cm wide, ovate with serrate margin, rounded tip and cordate base. Calyx reddish green, split, 5 mm long. 2-3 flowers per peduncle. Corolla infundibuliform-salverform, 2.5 cm long × 6-8 cm wide, tube pale reddish yellow with red lines, petals pale green with red guide lines. Available from Dibley's Nursery, UK. (see photo on page 40)



Streptocarpus 'Lilac Lady'



Streptocarpus 'Royal Montreal'



Episcia 'Blue Mist'



Eucodonia 'Pat's Pet Parrot'

***Streptocarpus* 'Lilac Lady'**, 2006, IR06928, Brian Grieve, UK. (*S.* 'Franken Dainty Lady' × self). Cross made July 2003, planted Oct. 11, 2003 and first flowered May 2004. Fertile but reproducible only vegetatively. Compact rosette. Leaves mid green, 21 cm long × 11 cm wide, ovate with serrate margin, rounded tip and cuneate base. Calyx dark greenish-bronze, split, 6 mm long. Up to 13 flowers per peduncle. Corolla salverform, 4 cm long × 5.5 cm wide, lilac with deep lilac venation, petals covered with very small deep lilac spots, margin deeper lilac, 4 purple guide lines in throat.

***Streptocarpus* 'Royal Montreal'**, 2006, IR06929, Elisabeth Parent, CAN. (*S.* 'Royal Mix' × 'Royal Mix'). Planted Apr. 2003, first flowered Dec. 2003. Fertile but reproducible only vegetatively. Rosette. Leaves bullate, variegated green, white and cream, 6-8 in. long × 1-1/2 in. wide, linear with crenate margin and acute tip. Calyx green, split, 1/4 in. long. 1-3 flowers per peduncle. Corolla salverform, 2-2-1/2 in. long × 2-2-1/2 in. wide, lavender with magenta lines on lower three lobes.

***Episcia* 'Blue Mist'**, 2006, IR06930, Betty Cessna, PA. (*E.* 'Silver Skies' × *E.* 'Faded Jade'). Cross made Dec. 14, 2004, planted Mar. 1, 2005. Reproducible only vegetatively. Spreading rosette. Leaves silver-blue, bullate, 4-3/4 in. long × 2-3/4 in. wide, ovate with crenate margin, rounded tip and cuneate base. Calyx leafy, green, 3/8 in. long. 4 flowers per peduncle. Corolla salverform, 3/4 in. long × 7/8 in. wide, red.

***Eucodonia* 'Pat's Pet Parrot'**, 2006, IR06931, Gary Dunlap, MO. (*E.* 'Adele' × *E.* 'Celeste'). Cross made Oct. 31, 2000, planted Mar. 28, 2001 and first flowered Sept. 15, 2001. Reproducible only vegetatively. Spreading, to 25 cm tall. Leaves bright green, bullate, hairy, 12 cm long × 7 cm wide with 4 cm petiole, ovate with serrate margin, acute tip and cordate base. Calyx split, green, 6 mm long. 2-3 flowers on a 10 cm pedicel. Corolla salverform, 4 cm long × 3 cm wide, purple tube and face, white throat with yellow stripe, bottom lobe is turned up. Available from Pat's Pets.

***Eucodonia* 'Pat's Pet Penguin'**, 2006, IR06932, Gary Dunlap, MO. (*E.* 'Adele' × *E.* 'Celeste'). Cross made Oct. 31, 2000, planted Mar. 28, 2001 and first flowered Sept. 15, 2001. Reproducible only vegetatively. Spreading, to 20 cm tall. Leaves bright green, bullate, hairy, 12 cm long × 7 cm wide with 4 cm petiole. ovate with serrate margin, acute tip and cordate base. Calyx split, green, 6 mm long. 2-3 flowers on a 10 cm pedicel. Corolla salverform, 4 cm long × 3 cm wide, purple tube and face, white throat with darker veining and dots on lobes. Available from Pat's Pets.

***Eucodonia* Pat's Pet Toucan'**, 2006, IR06933, Gary Dunlap, MO. (*E.* 'Adele' × *E.* 'Celeste'). Cross made Oct. 31, 2000, planted Mar. 28, 2001 and first flowered Sept. 15, 2001. Reproducible only vegetatively. Spreading, to 30 cm tall. Leaves bright green, bullate, hairy, 12 cm long × 5 cm wide with 3 cm petiole, ovate with serrate margin, acute tip and cordate base. White hair on reverse of leaf shows around the serrations, creating a border of white hair. Calyx split, green, 6 mm long. 2-3 flowers on a 10 cm pedicel. Corolla salverform, 4 cm long × 3 cm wide, dark purple tube and face, white throat with faint yellow stripe. Available from Pat's Pets.

×***Smithicodonia* 'Pat's Pet Mockingbird'**, 2006, IR06934, Gary Dunlap, MO. (*E.* 'Adele' × *S. multiflora*). Cross made Oct. 31, 2000, planted Mar. 28, 2001 and first flowered Sept. 15, 2001. Reproducible only vegetatively. Spreading, to 30 cm tall. Leaves light green, bullate, hairy, 11 cm long × 9 cm wide with 8 cm petiole, orbicular with serrate margin, acute tip and cordate base. Calyx split, green, 6 mm long. Pedicel 5 cm tall with 2-3 flowers. Corolla salverform, ruffled, 4 cm long × 3 cm wide, light lavender tube, lavender face, white throat with yellow stripe. Available from Pat's Pets.

×***Smithicodonia* 'Pat's Pet Swan'**, 2006, IR06935, Gary Dunlap, MO. (*E.* 'Adele' × *S. multiflora*). Cross made Oct. 31, 2000, planted Mar. 28, 2001 and first flowered Sept. 15, 2001. Reproducible only vegetatively. Spreading, to 30 cm tall. Leaves light olive green, bullate, hairy, 10 cm long × 8 cm wide with 7 cm petiole, orbicular with serrate margin, acute tip and cordate



Eucodonia 'Pat's Pet Penguin'



×*Smithicodonia* 'Pat's Pet Mockingbird'



Smithiantha 'Pat's Pet Chinchilla'



Smithiantha 'Pat's Pet Cougar'

base. Calyx split, green 6 mm long. Pedicel 4 cm with 2-3 flowers. Corolla salverform, 4 cm long $\times$ 3 cm wide, light lavender tube, dark lavender face with white veining, light lavender throat with rust dots and yellow stripe. Available from Pat's Pets.

***Smithiantha* 'Pat's Pet Antelope'**, 2006, IR06936, Gary Dunlap, MO. (*S. multiflora* hybrid $\times$ self). Cross made Oct. 10, 2000, planted Dec. 11, 2000 and first flowered June 15, 2001. Reproducible only vegetatively. Erect, to 35 cm tall. Leaves medium green mottled with light green, hairy, 15 cm long $\times$ 10 cm wide with 5 cm petiole, ovate with serrate margin, acute tip and cordate base. Calyx split, green, 6 mm long. Pedicel 4 cm. Corolla salverform, 4 cm long $\times$ 4 cm wide, white, with 7 equal sized lobes.

***Smithiantha* 'Pat's Pet Armadillo'**, 2006, IR06937, Gary Dunlap, MO. (*S. cinnabarina* $\times$ *S. canarina*). Cross made Dec. 20, 2000, planted Mar. 28, 2001 and first flowered Sept. 15, 2001. Reproducible only vegetatively. Erect, to 35 cm tall. Leaves red, bullate, hairy, 12 cm long $\times$ 10 cm wide, with 5 cm petiole, orbicular with serrate margin, acute tip and cordate base. Calyx green, split, 6 mm long. Pedicel 4 cm. Corolla salverform, 4.5 cm long $\times$ 2.5 cm wide, tube lilac on top, yellow below, lobes and throat yellow with faint lilac dots. Available from Pat's Pets.

***Smithiantha* 'Pat's Pet Chinchilla'**, 2006, IR06938, Gary Dunlap, MO. (*S. 'Red King'* $\times$ *S. 'Tropical Sunset'*). Cross made Dec. 20, 2000, planted Mar. 28, 2001 and first flowered Sept. 15, 2001. Reproducible only vegetatively. Erect, to 25 cm tall. Leaves light green with heavy olive green veins, bullate, hairy, 15 cm long $\times$ 11 cm wide with 6 cm petiole, orbicular with serrate margin, acute tip and cordate base. Calyx split, green, 6 mm long. Pedicel 4 cm long. Corolla salverform, 4.5 cm long $\times$ 2.5 cm wide, bright pink tube, lobes and throat white with pink dots. Available from Pat's Pets.

***Smithiantha* 'Pat's Pet Chipmunk'**, 2006, IR06939, Gary Dunlap, MO. (*S.* 'Golden Leopard' × *S. canarina*). Cross made Dec. 20, 2000, planted Mar. 28, 2001 and first flowered Sept. 15, 2001. Reproducible only vegetatively. Erect, to 35 cm tall. Leaves light green with yellow-green variegation, indentation where variegated, bullate, hairy, 10 cm long × 6 cm wide with 7 cm petiole, orbicular with serrate margin, acute tip and cordate base. Calyx green, split, 6 mm long. Pedicel 4 cm. Corolla salverform, 4 cm long × 2 cm wide, pink tube, white lobes with faint pink dots, yellow throat. Available from Pat's Pets.

***Smithiantha* 'Pat's Pet Cougar'**, 2006, IR06940, Gary Dunlap, MO. (*S. cinnabarina* × *S. canarina*). Cross made Dec. 20, 2000, planted Mar. 28, 2001 and first bloomed Sept. 15, 2001. Reproducible only vegetatively. Erect to 30 cm tall. Leaves maroon with green mottling, hairy, 12 cm long × 10 cm wide with 5 cm petiole, orbicular with serrate margin, acute tip and cordate base. Calyx green, split, 6 mm. Pedicel 5 cm. Corolla salverform, 4.5 cm long × 2.5 cm wide, pink tube, yellow lobes, edged with pink, yellow throat. Available from Pat's Pets.



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Mildred Stensler

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- Streptocarpus* 'Fancy Pants' × self
- Streptocarpus* 'Joker' × self

Streptocarpus johannis × unknown
Streptocarpus ('Iced Texas Twilight' × 'Christmas Day') × self
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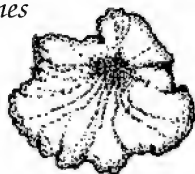
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New and Updated Online Contributions from Vienna on Gesneriaceae

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This article is intended to draw attention to two online contributions from the Vienna University that may be of interest for gesneriad growers and gesneriad enthusiasts in general. The first is an update of a website that was initiated in 2003, but has been accessible so far only to a limited number of persons, especially scientific colleagues of the authors. After considerable modification and update, this website has now been opened to the broad public under a new address. The second is a new contribution to a well-established website, namely Ron Myhr's "Gesneriad Reference Web".

Both contributions are based on the author's treatment of the family Gesneriaceae for the book series "The Families and Genera of Vascular Plants", edited by Prof. Klaus Kubitzki (Hamburg, Germany). The treatment of Gesneriaceae appeared in vol. 7 of the series devoted to "Dicotyledons, Lamiales (except Acanthaceae including Avicenniaceae)" in 2004 (volume editors: K. Kubitzki and J. Kadereit; publisher: Springer, Berlin/Heidelberg). However, the text has been modified in many ways, partly shortened and simplified, partly expanded and given more particulars. All information has been updated and the new genera described since 2004 have been incorporated.

Here the contents of the two contributions are briefly described and the URLs are given.

(1) "The Genera of Gesneriaceae. Basic information with illustrations of selected species."

URL: <http://www.genera-gesneriaceae.at>

This website, co-authored by L. E. Skog (Washington, DC), aims at a complete survey on the gesneriad genera presently accepted. Moreover, it gives some basic information on the family itself as well as past and present classifications.

The website opens with a Welcome section in which the aim and kind of information presented is explained.

This section is followed by a brief survey of the family (scientific name, original publication, family synonyms, description, number of genera and species, size of genera, geographical distribution).

The third introductory chapter is a survey of the historical and present classifications of Gesneriaceae (with listing of the genera and their position in suprageneric categories). It begins with the Swiss botanist A. P. De Candolle, who still recognized two independent families: Gesneriaceae (containing neotropical representatives only; treatment published as part of his *Prodromus* in 1839), and Cyrtandraceae (= Didymocarpaceae; comprising the paleotropical taxa; 1845). However, around 1830, the British botanists Robert Brown and David Don independently recognized that the two families were most closely related and should be united into a single one. The formal action was taken by Robert Brown in 1839 in the paper "On

Cyrtandrea", a preprint of parts of the "Plantae Javanicae rariores" (1838-1852). Here he also revised the paleotropical taxa then known (classified as Tribe III, Cyrtandreae). George Bentham, in his treatment of the family in *Genera Plantarum* in 1876, was the first to publish a revision of the whole family in its new wide sense. He was followed by Karl Fritsch, who, in his 1893-1894 revision of the family for the book series "Die Natürlichen Pflanzenfamilien", basically adopted Bentham's classification, but added numerous new tribes and subtribes. In the following 70 years, very little progress was achieved. In the late 1940s and early 1950s, B.L. Burtt from the Royal Botanic Garden Edinburgh again tackled the taxonomy of Old World Gesneriaceae and published a "preliminary" classification in 1963 in which very few of Fritsch's suprageneric categories (tribes and subtribes) survived. Twenty years later, the German-American botanist Hans Wiehler published a new classification of the New World genera. In 1995, Burtt and Wiehler combined their classifications of the Old and New World Gesneriaceae in a joint paper in the first issue of *Gesneriana*. This was the last classification based essentially on morphological characters.

Shortly afterwards, molecular systematics found its way into the taxonomy of Gesneriaceae. At first, the new methods proved successful in the classification of the New World Gesneriaceae (see Skog & Boggan, "A New Classification of the Western Hemisphere Gesneriaceae", in *GESNERIADS* 56(3): 12-17, 2006). The existing tribes were largely confirmed, but a new tribe, Sinningieae, was suggested by the molecular data. Most recently, another new tribe, Sphaerorrhizeae, was added. The classification of Old World Gesneriaceae has not yet come to an end. Also based essentially on (partly unpublished) molecular data (provided by various contributors such as M. Möller, Chang G. Jang, M. Pfosser, V. Mayer, etc.), the present author proposed an informal classification of paleotropical Gesneriaceae with disintegration of most tribes hitherto recognized (Weber 2004, cited above).

The core of the website is the treatment of the genera. Two indices lead to the particular genera: (1) an alphabetical index of all (over 150) genera currently recognised (even more as genera of uncertain familial position have been included), and (2) an "expanded" index also covering all generic synonyms presently known. The latter index provides a simple tool to immediately establish the present position of an old generic name, and the link is to the currently adopted genus.

Inter alia, the update includes the completion of the indices and the treatments of genera by the inclusion of the genera described, emended or abandoned since 2004 (e.g., *Alloplectus*, *Capanea*, *Gloxinia*, *Gloxiniopsis*, *Gloxinella*, *Mandirola*, *Paralagarosolen*, *Seemannia*, *Sphaerorrhiza*, *Wentsaiboea*). Moreover, in each genus treatment, several new topics are included, e.g., etymology, complete list of generic synonyms, type species, ecology, etc.

Regarding the individual genera, the information is given in a standard form and includes the following items (see sample on pages 52-53):

Name of the genus (including effective author/s)

Original publication (with journal titles abbreviated to customary standards)

Etymology (explanation of the scientific name)

Synonyms (with author(s) and year of publication)

Description of the genus (usually more detailed than in Weber, 2004)

Chromosome number

Type species (important for taxonomists)

Species number

Species names (including publication and synonyms) (electronic link to Skog & Boggan's "World checklist of Gesneriaceae", 2005):
<<http://persoon.si.edu/Gesneriaceae/Checklist>>

Distribution (geographical area)

Ecology (habitat, elevation, etc.)

Notes (on various topics such as taxonomic history, special characters, sub-division of genus, state of study, pollination syndrome, seed dispersal)

Selected references (in brief form)

Bibliography (electronic link to Skog & Boggan's "Bibliography of the Gesneriaceae", 2005):
<<http://persoon.si.edu/gesneriaceae/bibliography>>

Illustrations (these refer to one or several species of a genus)

It was not intended to illustrate as many species as possible, but to give an impression and to cover to some degree the morphological range of the genus, e.g., various flower types in relation to different pollination modes. Whenever possible, a picture of the type species (and, if available, also a picture from the original publication) has been inserted at the first place; the other species follow in alphabetical order; every picture can be magnified by clicking the picture area.

An important update concerns the inclusion of photographs of species of little-known Chinese genera. Profs. Li Zhen-Yu and Wang Yin-Zheng were kind enough to give permission to post photographs, either unpublished ones or published in the book Li & Wang (eds.), 2004: "Plants of Gesneriaceae in China" (Henan Science and Technology Publishing House; in Chinese).

In the navigation strip, the indices (leading to the treatments of the genera) are followed by an "epilog" of closing chapters: a request to the users to contribute to the website (photos, communication of errors, new information, etc.), and electronic links to other Gesneriaceae websites and gesneriad societies. The last section expresses the author's gratitude to the numerous people who have helped to establish the website by contributing information and illustrative materials.

(2) "Gesneriaceae: a Scientific Perspective", in Ron Myhr's "The Gesneriad Reference Web".

URL: <http://www.gesneriads.ca>

This new entry in Ron Myhr's well-known website was opened in March 2007. It includes general information on the morphology and biology of Gesneriaceae. Illustrations are mainly by the author and Ron Myhr, who admirably invested much time and energy in the quality of the presentation. Chapters (listed in the navigation strip) include:

Number of genera and species (present counts and estimates)

Distribution (according to the major groups such as Coronantheroid, Gesnerioid, Epithematoid and Didymocarpoid Gesneriaceae)

Seedlings (iso- and anisocotylous condition of the cotyledons or "seed leaves")

Stem and roots (caulescent and rosette plants, development or suppression of primary root)

Leaf form and arrangement (leaf form diversity, decussate and spiral pattern, anisophylly)

Life forms and growth patterns (1 & 2; annual herbs, perennial herbs, with ground stems, stolons, rhizomes and rootstocks, scaly rhizomes, stringy rhizomes, tubers, subshrubs and shrubs, arborescent shrubs and trees, climbers, epiphytes)

Exceptional morphologies (1 & 2; *Streptocarpus*, Epithematoid Gesneriaceae, *Lembocarpus* and *Sinningia tuberosa*)

Inflorescence structure (pair-flowered cyme and its variations)

Flower structure (1 & 2; diversity of calyx, corolla, stamens, nectary, ovary, and placentae)

Floral development (timing and emergence of organ primordials)

Pollination (1 & 2; avoidance of self-pollination, animal pollinators, floral rewards, mockups and respective floral categories: nectar flowers, deceptive nectar flowers, pollen flowers, partially or fully deceptive pollen flowers, and perfume flowers; fragrance, bee-flowers: non-euglossine pollinated bee flowers, euglossine-pollinated nectar flowers, and euglossine-pollinated perfume flowers; pollination by butterflies, moths and flies; bird pollination, hummingbird flowers: tubular, columneoid, hypocyrtoid, converted euglossine flowers, and bat pollination)

Fruits and seeds (capsular fruits in New and Old World Gesneriaceae, fleshy capsules, indehiscent fruits, ovules and seeds, and appendaged seeds)

Seed dispersal (unspecialized seeds, dispersal by wind, water, animals such as birds and small mammals, and by ants)

Chromosome numbers (patterns found in Coronantheroid, Gesnerioid, Epithematoid and Didymocarpoid Gesneriaceae)

Habitat and special adaptations (diversity of habitats, ecophysiology)

Classification of Gesneriaceae (history and present approaches)

Phytogeographical history (Where do Gesneriaceae come from? How did they split phytogeographically?)

Affinities of Gesneriaceae (discussion of nearest relatives)

Economic uses (mainly ornamentals)

Ethnobotany (medicinal uses by indigenous people and examples of medicinally used species)

Books on ornamental Gesneriaceae

Selected references (1 & 2; list of references given in the text)

It is hoped that the two online contributions fill a need and make Gesneriaceae still more attractive for a broad public. Users are kindly invited to contribute to the improvement of the presented information and to make the pages more informative and appealing by informing the author(s) of deficiencies and/or providing better illustrative material.

A sample of a typical genus description (*Agalmyla* selected) from the Genera of Gesneriaceae Website is shown on the following pages.

Agalmyla

Full name and orig. publication: *Agalmyla* Blume, Bijdr. Fl. Ned. Ind. 766 (July - Dec. 1826).

Etymology: From the Greek ἀγάλμα, *agalma*, ornament; and ὕλη, *hyle* [hyle], wood, forest; "ornament of the forest" because of the brilliant red flowers.

Synonyms: *Ornithalia* Blume (1828), nom. illeg., *Orythia* Endl. (1841); sphalm. for *Ornithalia*; *Dichrotrichum* [Reinw. ex]. De Vries (1856), (1919), *Tetradema* Schltr. (1920).

Infraclassification position: Didymocarpaceae Gesneriaceae - "Advanced Asiatic and Malesian genera" (Weber 2004).

Description: Perennial climbers with short roots produced along the stem, a few spp. terrestrial shrubs. Leaves opposite, of herbaceous texture, usually strongly anisophyllous (isophyllous in the terrestrial species), large leaf variable in shape and indumentum, small leaf scale-like and caducous or with short petiole and blade. Cymes axillary, subsessile to long-pedunculate; bracteoles variable in size and conspicuousness; flowers much congested. Sepals usually connate, rarely free. Corolla usually with a distinctly arcuate tube; limb weakly to strongly bilabiate, the upper lip of 2 lobes and the laterals spreading, or the two upper and two lateral lobes forming the upper lip; mouth open or laterally compressed; colour red, with or without black lines on the lobes, sometimes yellow in the throat; inside of the tube towards the base with (or without) an annulus or with five patches of hairs. Fertile stamens 4, didynamous, in a few species only 2, exserted; filaments inserted at middle of corolla tube, anthers syntheous, if four then those of the shorter stamens sometimes smaller, coherent in pairs by their apices, thecae parallel, dehiscing longitudinally. Nectary annular to cupular. Ovary slender-cylindrical, often stipitate; stigma bilobed, with two large lateral lobes. Capsule elongate, cylindric, dehiscent by two and then four valves. Seeds with a filiform appendage at each end, the apical one brown, the hilar one hyaline; seed attached at the base of, or near the top of the hyaline appendage.

Chromosome number: $2n = 32$.

Species number: 96 (Hilliard & Burt 2002).

Species names (incl. publication and synonyms): See Skog, L.E. & J.K. Boggan. 2005: World checklist of Gesneriaceae: <http://persoon.si.edu/Gesneriaceae/Checklist>.

Type species: *Agalmyla parasitica* (Lam.) Kuntze.

Distribution: Malesia (Sumatra, Malay Peninsula, Borneo, Java, Sulawesi, New Guinea).

Ecology: Occurring in lowland and montane rainforest, mostly climbers.

Notes: Hilliard & Burt (2002) subdivide the genus into three sections:

- (1) sect. *Agalmyla* (strongly anisophyllous, minor leaf scale-like, inflorescence sessile or subsessile, annulus or patches of hairs in corolla tube present, stamens 4 or 2, long exserted; Malay Penins., Sumatra, Java, Borneo, Palawan).
- (2) sect. *Exannularia* Hilliard & Burt (anisophyllous, minor leaf with petiole and blade, corolla without annulus; Sulawesi and nearby islands).
- (3) sect. *Dichrotrichum* (De Vries) Hilliard & Burt (habit as in sect. *Exannularia*, infl. mostly pedunculate, stamens always 4, not or scarcely exserted, corolla with annulus or five patches of hairs; Philippines, Moluccas, New Guinea).

Thus the first section occurs only west, and the two other ones only east of Wallace's line. *Agalmyla* seems remotely allied (and not as close as suggested by the similar corolla shape and colour) to *Aeschynanthus*, but differs essentially in most species (a) in the climbing (vs. epiphytic) habit, with the stem rooting in the soil and clung to bark of the host tree by numerous short roots, and (b) in the strongly anisophyllous leaves. Size, shape and coloration of the flowers indicate pollination by birds.

Selected references: Ridley, Fl. Malay Penins. 2: 501 (1923), reg. rev.; Backer & Bakh. f., Fl. Java 2: 525 (1965), reg. rev.; Burt, Notes Roy. Bot. Gard. Edinburgh 28: 219-225 (1968), notes; Rosser & Burt, Notes Roy. Bot. Gard. Edinburgh 29: 39-58 (1969), anat.; Burt, Edinburgh J. Bot. 49: 285-296 (1993), new spp.; Hilliard & Burt, Blumea 44: 381-389 (1999), new spp.; Hilliard & Burt, Edinburgh J. Bot. 59: 1-210 (2002), rev.

Bibliography: See Skog, L.E. & J.K. Boggan. 2005. Bibliography of the Gesneriaceae. 2nd edition: <http://persoon.si.edu/Gesneriaceae/Bibliography>.

Illustrations:



Agalmyla parasitica (Lam.) Kuntze, type species

Left: Bot. Mag. t. 5747 (1868), as *Agalmyla staminea*
Middle & right: Java, Cibodas, phot. A. Weber (1995)



Agalmyla choriseipala (C.B. Clarke)
O.M. Hilliard & B.L. Burt

Cult. RBG Edinburgh, phot. A. Weber (2002)

last modified: 2007-01-05

Coming Events

September 29-30 – Massachusetts
– Annual combined plant societies judged show and sale at the Tower Hill Botanic Garden, 11 French Drive, Boylston. Saturday 10:00 am – 5:00 pm; Sunday 10:00 am – 4:00 pm. Participating will be the New England Chapter of the Gesneriad Society and the Buxton Branch of the American Begonia Society. Admission: \$8.00 adults; \$5 seniors and youths (6-18). Contact Ruth Cameron <ruthacam@verizon.net>.

September 29-30 – Missouri
– Heart of America Gesneriad Society Annual Judged Flower Show and Plant Sale "Carnival of Gesneriads" at Loose Park Garden Center Building (816-784-5300), 5200

Pennsylvania Ave., Kansas City. Show entries accepted 8:30 am – 11:00 am Friday. Open to the public Saturday and Sunday 10:00 am – 3:00 pm. Contact Show Chair: Linda Golubski <lgolubski@sbcglobal.net> (816-229-2051). Additional Contact: Susan Grose <sagrose@aol.com> (913-381-7889).

October 7 — New Jersey — Frelinghuysen Arboretum Gesneriad Society annual show and plant sale at the Frelinghuysen Arboretum in Morristown. Sunday 11:00 am – 3:30 pm. Free admission and parking; handicapped accessible. Contact Jeanne Katzenstein <jkatzenste@aol.com> (973-627-2755).

CHAPTER PRESIDENTS

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Arkansas	Northwest Arkansas Gloxinia & Gesneriad Society — David Harris, 1372 S. Kentwood Ave., Springfield, MO 65804-0220
California	Culver City — Charlotte Rosengrant, 2705 Krim Dr., Los Angeles, CA 90094 Delta Gesneriad & African Violet Society — Barbara Elkin, 2855 Gayle Lane, Auburn, CA 95602 Grow and Study — Al Striepens, 2225 Deepgrove Ave., Rowland Heights, CA 91748-4208 Peninsula — JoAnna Behl, 361 Tioga Ct., Palo Alto, CA 94306 San Francisco Gesneriad Society — Katherine Henwood, 819 Linda Mar Blvd, Pacifica, CA 94044
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Minnesota	Twin Cities Area — Michael Derksen, 8213 Pillsbury Ave. S., Bloomington, MN 55420-2239
Missouri	Gateway West — Gary Dunlap, 4189 Jarvis Road, Hillsboro, MO 63050
Nebraska/Iowa	Omaha — Tom Bruning, 31233 Beechnut Rd., Treynor, IA 51575
New Hampshire	Granite State AV & Gesneriad Society — Pam Hager, 3 Gervaise Drive, Derry, NH
New Jersey	Frelinghuysen Arboretum — Karyn Cichocki, 79 Beaver Run Rd., Lafayette, NJ 07848
New York	The African Violet and Gesneriad Society of Western New York — Michael Kotarski, 427 Chicora Rd., Lewiston, NY 14092 Gesneriad-Dicts of Western New York — Linda Rowe, 12716 Coleman Rd., Red Creek, NY 13143 Greater New York — Michael A. Riley, 101 West 104th St., New York, NY 10025 Long Island — Joe Palagonia, 84-08 164th Ave., Howard Beach, NY 11414 Vestal African Violet & Gesneriad Society — Colin Dimon, 833 E. Circle Drive, Vestal, NY 13850
Oregon	Mt. Hood — Vivian Scheans, 4660 SW Dogwood Drive, Lake Oswego, OR 97035-8412
Pennsylvania	Liberty Bell — Stephen Maciejewski, 2030 Fitzwater Street, Philadelphia, PA 19146 Pittsburgh African Violet & Gesneriad Society — Georgene Albrecht, 101 Oak Heights Dr., Oakdale, PA 15071
Tennessee	Tennessee — Molly Schneider, 608 Hillwood Blvd., Nashville, TN 37205
Washington	Puget Sound — Rohm Gustafson, 158 18th Ave., Seattle, WA 98122
Washington, DC	National Capital — Carol Hamelink, 13707 Concord Ave., Laurel, MD 20707
Canada	Carefree — Florence Duesterbeck, 2235 Montreal Street, Regina, Saskatchewan S4P 1L7, Canada Edmonton — La Rae Pohl, 97-53431 Reg Rd., Ardrossan, AB T8G 2B3 Canada Toronto — Paul Lee, 2nd Line 6693 RR #3, Fergus, Ont. N1M 2W4 Canada Vancouver AV & Gesneriad Society — Arleen Dewell, #311-2366 Wall St., Vancouver, BC, V5L 4Y1 Canada
Sweden	Gesneriasts of Sweden — Åsa Tysk, Ölandsresan 118, 757 55 Uppsala, Sweden

Go to www.gesneriadsociety.org for chapter email contacts.

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Membership Cards: The address label on the back cover of GESNERIADS is your membership card.

Bylaws: Copies of The Gesneriad Society Bylaws are available to all members by writing to Peter Shalit, 1122 E. Pike St., PMB 637, Seattle, WA 98122-3916.

Chapters: Report changes of chapter presidents to the Chapters and Affiliates Chair and the Editor.

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The Gesneriad Society, Inc. is a tax-exempt organization with an IRS Section 501(c) (3) tax status for donations. Contact the Development Chairperson or send your donations to:

Development Chair <captaur@optonline.net>
Paul Susi, 10 Briarwood Lane, Millerton, NY 12546

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The Gesneriad Society Membership Secretary, Bob Clark,
1122 East Pike Street, PMB 637, Seattle, WA 98122-3916 USA

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FIGURE 34. *Solenophora calycosa* J. D. Smith.—A. Flowering branch ($\times \frac{1}{2}$).—B. Flower ($\times \frac{2}{3}$). [After Woudstra & Schuyf 499 (1901).]

Solenophora calycosa illustrated
in Annals of the Missouri Botanical
Gardens: Flora of Panama (L.E. Skog),
Vol. 65, 1978, No. 3, 988.

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